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**From:** Rowland, Jess [Rowland.Jess@epa.gov]  
**Sent:** 11/18/2015 2:22:54 PM  
**To:** Housenger, Jack [Housenger.Jack@epa.gov]  
**Subject:** Fwd: JMPR Glyphosate Review

FYI....

Sent from my iPhone

Begin forwarded message:

**From:** "Shah, Pv" <[Shah.Pv@epa.gov](mailto:Shah.Pv@epa.gov)>  
**Date:** November 18, 2015 at 8:48:45 AM EST  
**To:** "Lewis, Susan" <[Lewis.Susan@epa.gov](mailto:Lewis.Susan@epa.gov)>  
**Cc:** "Herndon, George" <[Herndon.George@epa.gov](mailto:Herndon.George@epa.gov)>, "Rosenblatt, Daniel" <[Rosenblatt.Dan@epa.gov](mailto:Rosenblatt.Dan@epa.gov)>, "Vogel, Dana" <[Vogel.Dana@epa.gov](mailto:Vogel.Dana@epa.gov)>, "Rowland, Jess" <[Rowland.Jess@epa.gov](mailto:Rowland.Jess@epa.gov)>, "Dawson, Jeffrey" <[Dawson.Jeff@epa.gov](mailto:Dawson.Jeff@epa.gov)>  
**Subject:** JMPR Glyphosate Review

Susan

As mentioned previously, the JMPR has scheduled a special meeting to re-evaluate glyphosate, malathion and diazinon. This meeting is scheduled for in the first week of June. I have been invited by the WHO secretariat to participate at the meeting and also prepare a monograph containing the review of glyphosate published as well as submitted data under data call in by the JMPR.

Thanks

PV

P. V. Shah, Ph.D  
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Registration Division  
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Message

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**From:** Rowland, Jess [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=F726A9239C924C08B38C1A0940CCFD5E-JESS ROWLAND]  
**Sent:** 5/26/2015 1:28:07 PM  
**To:** Kent, Ray [Kent.Ray@epa.gov]  
**Subject:** Glyphosate Secondary Review  
**Attachments:** Atkinson MOUSE DER.doc; glyphosate.atkinson.num7793.vol1.pdf; glyphosate.atkinson.num7793.vol2.pdf; glyphosate.atkinson.num7793.vol3.pdf  
**Importance:** High

Hi Raymond

Here are the DER and the study report (Vol 1 has the main study)

GO ahead and make the track changes on the DER.

Can I have this by next Monday

Thanks for doing this.

JR

Jess Rowland,  
Deputy Director  
Health Effects Division  
703-308-2719

INVERESK RESEARCH INTERNATIONAL  
Report No. 7793

GLYPHOSATE  
104 WEEK DIETARY CARCINOGENICITY STUDY IN MICE

IRI Project No. 438618

Data Requirement:

US EPA Pesticide Assessment Guidelines, Subdivision F, 83-2

Authors:

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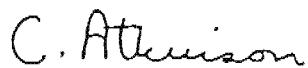
Total Number of Pages: 750

IRI 438618

2

AUTHENTICATION

'I, the undersigned, hereby declare that this work was performed under my direction and in accordance with the principles of Good Laboratory Practice. The study was conducted according to the procedures herein described and this report represents a true and accurate record of the results obtained.'



C Atkinson BSc  
Study Director

Date:

ISSUED

- 7 APR 1993



INVERESK  
RESEARCH  
INTERNATIONAL

Report No. 7793

QUALITY ASSURANCE STATEMENT

The conduct of this study has been subjected to periodic inspections by the IRI Quality Assurance Unit. The dates of inspection are given below.

IRI Project No. 438618Report No. 7793

Date of Q.A. Inspection

Date of Report to Management

22 December 1989	16 January 1990
2 February 1990	12 February 1990
21 February 1990	1 March 1990
22 March 1990	9 April 1990
10 May 1990	29 May 1990
25 July 1990	1 August 1990
9 August 1990	10 August 1990
6 September 1990	11 September 1990
27 September 1990	2 October 1990
25 October 1990	29 October 1990
14 November 1990	22 November 1990
13 December 1990	21 December 1990
23 January 1991	30 January 1991
31 January 1991	12 February 1991
14 February 1991	15 February 1991
2 April 1991	11 April 1991
11 April 1991	24 April 1991
29 May 1991	11 June 1991
13 June 1991	18 June 1991
4 July 1991	5 July 1991
28 August 1991	9 September 1991
2 October 1991	8 October 1991
14 November 1991	15 November 1991
2 December 1991	11 December 1991
18 December 1991	23 December 1991

This report has been audited by the Quality Assurance Personnel according to the appropriate Standard Operating Procedure. The report is considered to describe accurately the methods and procedures used in the study and the original data generated during the study.

Signed: D. Watson  
(Quality Assurance)

Date: 6<sup>th</sup> April 1993

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PERSONNEL INVOLVED IN PROJECT 438618

Study Director: D J Everett BSc CBiol MIBiol (to  
2 December 1991) C Atkinson BSc (from  
2 December 1991)

Project Leader: C Atkinson BSc (to 2 December 1991) A V  
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Report Preparation: T Martin BSc MSc

Animal Services Manager: A Dick FIAT

Clinical Pathologist: P Hudson FIMLS

Analytical Chemist: K Fisher BSc

Formulation Supervisor: A Soden

Pathologist: D Robb BVMS MRCVS

Statistician: D Chalmers MSc MIS

Quality Assurance: A W Waddell BSc PhD  
D Watson BSc  
G Cow BSc

Sponsor Monitor: R Hjortkjaer DVM PhD

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CONFIDENTIAL  
PROVISIONAL

SUMMARY

Test Material: Technical Glyphosate (Batch No. 206-JaK-25-1, purity 97.5% and 100.2% as determined by IRI).

Guidelines Followed: US EPA Pesticide Assessment Guidelines Subdivision F, 83-2.

Deviation from Guidelines: None.

GLP Regulations: Including those of OECD, US EPA and Japanese MAFF.

Animals: Fifty CD-1 mice/sex/dose level.

Duration of Dosing: After 104 weeks all surviving animals were killed.

Dose Levels Tested: 0, 100, 300 and 1000 mg.kg<sup>-1</sup>.day<sup>-1</sup>.

Experimental Procedure: The concentration of Glyphosate in the diet was adjusted weekly for the first 13 weeks and approximately once every 4 weeks thereafter in order to achieve a constant dose level, in mg of test material per kg of animal's body weight per day.

During Weeks 52, 77 and 102 of dosing, all surviving animals had differential blood smears prepared, fixed and stained, with the Control and High dose groups being subjected to an investigation of differential blood counts.

On completion of 104 weeks dosing, all surviving animals were killed and necropsied (with selected organs being weighed from selected animals). All Control and High dose animals and all premature decedents from the Low and Intermediate dose groups underwent a full histological examination. The Low and Intermediate dose groups killed at the terminal necropsies underwent a limited histological examination.

Diet Analysis:

Stability and homogeneity were assessed prior to dosing under IRI Project No. 337502. Glyphosate was found to be stable for at least 21 days in the diet and homogeneity was within acceptable limits ( $\pm 10\%$ ).

Formulated diets (analysed under IRI Project No. 339845) from each dose group were analysed for the content of Glyphosate at approximately fortnightly intervals for the first 12 weeks of the study and approximately 2 monthly intervals thereafter. Results were generally within acceptable limits ( $\pm 10\%$ ) for accuracy of concentration and homogeneity.

Observations

Mortality:

There were 208 unscheduled deaths distributed as follows:

Sex	Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )			
	1 (0)	2 (100)	3 (300)	4 (1000)
♂	24/50	25/50	21/50	25/50
♀	29/50	34/50	24/50	26/50

There was no evidence to suggest that any of these deaths were due to administration of Glyphosate.

Clinical Signs: There were no notable intergroup differences.

Body Weight: There were no notable intergroup differences.

Food Consumption: There were no notable intergroup differences.

Water Consumption: There were no visible intergroup differences.

Achieved Dosages: These were generally close to the nominal.

#### Laboratory Investigations

Differential Blood Counts: There were no notable intergroup differences.

#### Terminal Studies

Organ Weights: There were no notable intergroup differences.

Necropsy Findings: There were no notable intergroup differences.

Histological Findings: There were no findings that could be definitely attributed to administration of Glyphosate.

No Toxicological Effect Level (NTEL):  $1000 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{day}^{-1}$ .

Conclusion

Dosing CD-1 mice for 104 weeks with up to  $1000 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{day}^{-1}$  produced no signs of carcinogenic potential at any dose level.

INTRODUCTION

This study was designed to give carcinogenicity information on Glyphosate, a herbicide. Glyphosate was administered via the diet at concentrations calculated to achieve dose levels of 0, 100, 300 or  $1000 \text{ mg.kg}^{-1} \cdot \text{day}^{-1}$ .

The dietary route of administration was selected for this study as this has been defined by the Sponsor as the most probable route of human exposure.

The mouse was selected as the test model because of its ready availability and proven suitability in carcinogenicity studies.

Dose levels were selected on the basis of results from a 13 Week Dietary Toxicity Study in Mice (IRI Project No. 437918) and a Subchronic Toxicity Study conducted by the National Toxicology Program (Contract No NOI-ES-75198). They were also based on the EPA position of  $1000 \text{ mg.kg}^{-1} \cdot \text{day}^{-1}$  in pesticide carcinogenicity studies with reference to 'Pesticide Assessment Guidelines Subdivision F, Position Document Selection of a Maximum Tolerated Dose (MTD) in Oncogenicity Studies (PB88-116736), (US) Environmental Protection Agency, 1987'.

In the study conducted by IRI, there were no notable findings using dose levels up to  $4500 \text{ mg.kg}^{-1} \cdot \text{day}^{-1}$ . In the study conducted by the National Toxicology Program, effects were evident in both sexes as reduced body weight gain at 25000 and 50000 p.p.m. Females receiving 25000 and 50000 p.p.m. also showed dehydration, emaciation and hypoactivity. Histological evaluation of salivary glands revealed effects in the parotid salivary gland at dose levels of 6250, 12500, 25000 and 50000 p.p.m. in both sexes.

The experiment was undertaken at the Elphinstone Research Centre of Inveresk Research International (IRI) within the rodent toxicology

animal accommodation. Animals arrived on 30 November 1989 and the necropsies were completed by 23 December 1991.

All data generated and recorded during this study will be stored in the Scientific archives of Inveresk Research International Limited for 10 years after issue of the final report. At the end of the 10 year period the Sponsor will be consulted regarding the disposal or continued storage of raw data.

EXPERIMENTAL PROCEDURETest Material

Lots of Glyphosate (obtained from one batch), a white powder, were received from Cheminova A/S, DK-7620, Lemvig, Denmark, according to the following schedule:

Batch No.	Quantity (kg)	Date	Purity as Determined by Sponsor (%)	Purity as Determined by IRI (%)
206-JaK-25-1	10 kg	22 November 1989	98.6	97.5
206-JaK-25-1	3 kg	18 June 1991	98.6	100.2

The test material was stored in the dark at ambient temperature in the dispensary of IRI at the Elphinstone Research Centre. An analytical certificate of the test material as produced by IRI (all work carried out under IRI Project No. 339892) is presented in Appendix 1.

Animals

Four hundred and sixty four CD-1 mice (234 males and 230 females) were obtained from Charles River (UK) Limited, Margate, Kent, UK on 30 November 1989. They were ordered to be ca 4 weeks old on arrival (males-21 g, females-18 g).

Two hundred males and 200 females were allocated to treatment groups and allowed to acclimatise to their new environment for 21 days before treatment began.

Housing

Mice were housed in an animal room at a room temperature normally of  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$  and a target relative humidity of  $55\% \pm 10\%$  (both automatically controlled) with 15-20 air changes per hour. A 12 h light/dark cycle was controlled by a time switch, light hours being

0700-1900 h. Room location was at Elphinstone Research Centre within the rodent toxicology accommodation.

#### Caging and Cage Sanitation

Mice were housed either one male or one female per cage in suspended polypropylene cages (overall dimensions ca 480 x 150 x 130 mm) with stainless steel wire grid tops and sterilised whitewood shavings as bedding (typical analysis presented in Appendix 2). Cages were changed once each week during the study. Each cage had a polypropylene water bottle (total capacity 300 ml) with rubber washer and melamine cap. Water bottles were changed once each week during the course of the study. Diet was changed once each week for the first 13 weeks of the study and then at approximately 2 weekly intervals thereafter. Diet hoppers were changed at approximately 4 weekly intervals up until the end of the study.

#### Diet and Water

During the course of the study, tap water and Rat and Mouse (modified) No. 1 Diet SQC Expanded (Fine Ground) were available to the mice ad libitum. The diet was supplied by Special Diets Services Limited, Stepfield, Witham, Essex, CM8 3AD. Typical analyses for both diet and water are presented in Appendices 3 and 4.

#### Animal Room Sanitation

Each day, floors were swept and washed with disinfectant solution (Tego, supplied by Th Goldschmidt AG, Tego House, Victoria Road, Ruislip, Middlesex HA4 0YL). Up until 11 July 1991, the concentration of Tego used was 1%. From 12 July 1991 onwards, the concentration of Tego used was 0.5%. Once each week, walls, benches and racking within the animal room were washed with the same disinfectant solution.

Distribution of Animals into Treatment Groups

On the day of arrival, animals were distributed into treatment groups as follows:

Cages were placed on racks, then starting upon receipt, first with male mice and working left to right, top to bottom of each rack, a transporting box was opened and an animal placed in the first cage. A second mouse was removed from the transporting box and placed in the next cage and so on until the requisite number of cages each contained one male mouse.

This process was then repeated with new cages and female mice.

Each cage was ascribed a treatment group by the use of computer generated random number sequences.

Animal Identification and Dose Levels

Each mouse was given a unique earmark which identified it within the study and corresponded to that animal's study number. Each mouse was ascribed a cage card which identified that animal by project number, cage number, animal number, sex and treatment group. Each cage card was colour coded according to treatment group.

Treatment groups were allocated to the numbered animals as follows:

Group	Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal	
		Males	Females
1	0	1-50	201-250
2	100	51-100	†251-300
3	300	101-150	301-350
4	1000	151-200	351-400

† = Animal No. 260♀ was re-earnumbered Animal No. 666♀ during Week 15 to avoid equivocality

† = Animal No. 274♀ was replaced by Animal No. 401♀ during Pretrial due to it dying prior to the start of dosing

#### Dose Levels

Dose levels were selected on the basis of results from a 13 Week Dietary Toxicity Study in Mice (IRI Project No 437918) and a Subchronic Toxicity Study conducted by the National Toxicology Program (Contract No NOI-ES-75198). They were also based on the EPA position of 1000 mg.kg<sup>-1</sup>.day<sup>-1</sup> in pesticide carcinogenicity studies with reference to 'Pesticide Assessment Guidelines Subdivision F, Position Document Selection of a Maximum Tolerated Dose (MTD) in Oncogenicity Studies (PB88-116736), (US) Environmental Protection Agency, 1987'.

#### Route and Duration of Treatment

Glyphosate was administered orally via the diet for a minimum of 104 weeks continual dosing, whereupon all surviving animals were killed. The concentration of Glyphosate in the diet was adjusted weekly for the first 13 weeks and approximately once every 4 weeks thereafter in order to achieve a constant dose level in mg of test material per kg of animal's body weight per day.

Preparation of Formulated Diets

Diets were prepared by direct admixture of the test material to untreated diet and mixing for 20 min in a Winkworth Change Drum mixer.

Fresh diets were prepared once every week for the first 13 weeks and at least once every 2 weeks thereafter.

Each mixed batch was stored in a closed container at ambient temperature.

Dietary Sampling and Analysis

Prior to the commencement of the study, data providing homogeneity and 21-day stability of Glyphosate were generated. The analytical results of this work are reported separately under IRI Project No. 337502.

A 100 g sample of diet from each group/sex was retained immediately after each diet preparation.

In addition, routine analysis was conducted on samples from formulated diets prepared for Weeks 1, 4, 8, 12, 15, 23, 30, 38, 46, 54, 62, 76, 83 and 93 of dosing. Details and results will be presented in the report of IRI Project No. 339845. A summary of results is presented in Appendix 5.

STUDY OBSERVATIONSMortality

Viability was checked once each morning and once as late as practicable on each day.

Clinical Signs and Palpable Masses

All animals were examined for reaction to treatment during the day. The onset, intensity and duration of these signs were recorded.

All animals received a detailed clinical examination and palpation once each week.

Body Weight

The weight of each animal was recorded at weekly intervals, commencing 2 weeks before the start of treatment up until Week 13 and at approximately 4 weekly intervals thereafter up until the end of the study.

Food Consumption

The quantity of food consumed by each animal was recorded once each week, commencing 2 weeks before the start of treatment up until Week 13 and at approximately 4 weekly intervals thereafter up until the end of the study.

Water Consumption

Water consumption was monitored by visual inspection throughout the treatment period.

LABORATORY INVESTIGATIONSDifferential Blood Counts

During Weeks 52, 77 and 102 of dosing, a blood sample was taken from all surviving animals via tailsnip without anaesthesia.

Differential blood smears were prepared, fixed and stained from all animals. A differential blood count was performed on smears from all surviving Control and High dose animals at each timepoint.

The parameters in the table below were examined.

Haematology Parameters	Code
Differential: Neutrophil	Neut
Lymphocytes	Lymp
Monocytes	Mono
Eosinophils	Eos

References for methods, abbreviations and units used in laboratory investigations are presented in Appendix 6.

#### Terminal Studies

All surviving animals were killed and necropsied. Method of killing was by carbon dioxide asphyxiation followed by exsanguination. The gross dissections and necropsies were performed under the supervision of a pathologist, with the organs/tissues listed below being weighed and/or fixed. All premature decedents were also necropsied.

Tissues	W	F	E
Liver (with gall bladder)	x	x	x
Heart	x	x	x
Kidney x 2	x	x	x
Lung x 2	x	x	x
Spleen	x	x	x
Adrenal x 2	x	x	x
Thymus	x	x	x
Testis x 2 (plus epididymides)	x	x	x

Tissues	W	F	E
Ovary x 2	x	x	x
Prostate	x	x	x
Uterus	x	x	x
Seminal vesicles		x	
Vagina		x	
Brain	x	x	x
Spinal cord (cervical, mid-thoracic and lumbar portions)		x	x
Muscle (thigh)		x	x
Pancreas		x	x
Submaxillary salivary glands	x	x	x
Sublingual salivary glands	x	x	x
Parotid salivary glands	x	x	x
Submandibular lymph node		x	
Pituitary	x	x	x
Skin and mammary gland		x	x
Bladder		x	x
Eye x2		x	
Optic nerve x2		x	
Tongue		x	
Aortic arch		x	x
Mesenteric lymph node		x	x
Thyroids (with parathyroids where present)		x	x
Trachea		x	x
Oesophagus		x	x
Stomach (glandular and non-glandular)		x	x
Intestine: duodenum		x	x
jejunum		x	x
ileum		x	x

Tissues	W	F	E
caecum		x	x
colon		x	x
rectum		x	x
Sciatic nerve		x	x
Bone (sternum and rib)		x	x
Nasal cavity		x	
Blood smear		x	
Any abnormal tissue		x	x
Ears		x	

W = to weigh

F = to fix

E = to examine histologically

Organs to be weighed were taken from 10 males and 10 females from each group at the terminal necropsies.

A blood smear was taken from all animals killed in extremis and fixed in methanol.

Samples of the above tissues were taken from all animals and placed in 10% neutral buffered formalin (except eyes and optic nerves which were preserved in Davidson's fluid). Eyes and optic nerves were examined only if abnormal.

Ears were taken for identification purposes.

Contracted bladders were distended with fixative at necropsy, the epithelial surface being examined at trimming.

The lungs were fixed in their entirety by perfusion with 10% neutral buffered formalin.

The gastrointestinal tract was opened at necropsy and the mucosal surface of the stomach, small and large intestines examined before fixation.

Liver lobes were sliced and the kidneys cut transversely, the cut surfaces being examined before fixation.

Submaxillary and sublingual salivary glands were weighed together.

Carcasses of animals were discarded immediately following necropsy and placing in fixative of all tissues listed above.

#### Processing of Fixed Tissues

Tissues were trimmed to a maximum thickness of 3 mm for processing.

Parenchymal organs, e.g. liver, were trimmed to allow the largest surface area possible for examination.

Mid-transverse sections through the entire cortex and medulla of each kidney were submitted.

Entire coronal (a transverse section parallel to the long axis of the body) sections of both right and left lungs including mainstem bronchi and bronchial lymph nodes were submitted.

The cross sections of brain included:

- a) frontal cortex and basal ganglia
- b) parietal cortex and thalamus, and
- c) cerebellum and medulla oblongata

Hollow organs were trimmed and blocked to allow a cross section slide from mucosa to serosa.

A section of sternum only (not rib) was prepared and examined.

Tissues were cut at 4-6  $\mu\text{m}$  thickness and stained with haematoxylin and eosin (H and E).

#### Histological Evaluation

All tissues fixed with the exception of nasal cavity, seminal vesicles, submandibular lymph node, eyes, optic nerves, tongue, vagina, rib, blood smears and ears were processed and examined histologically from all animals in the Control and High dose groups and all premature decedents. Kidneys, liver, lungs and any abnormal tissue were examined from all other animals in the Low and Intermediate dose groups.

#### Statistical Evaluation

Body weight and organ weight data were statistically analysed for homogeneity of variance using the 'F-max' test. If the group variances appeared homogeneous, a parametric ANOVA was used and pairwise comparison made via Student's t-test using Fisher's F-protected LSD. If the variances were heterogeneous, log or square root transformations were used in an attempt to stabilise the variances. If the variances remained heterogeneous, then a non-parametric test such as Kruskal-Wallis ANOVA was used.

Organ weights were also analysed conditional on body weight (i.e. analysis of covariance).

Differences in survival data between Control and groups receiving Glyphosate were assessed graphically using Kaplan-Meier plots.

Histology and tumour data were analysed using Fisher's Exact Probability test.

RESULTS

Start of Dosing: 21 December 1989  
 Duration of Dosing: 104 weeks  
 Terminal Necropsies: 18-23 December 1991

Dose Group	Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )
1	0
2	100
3	300
4	1000

OBSERVATIONSMortality (Figures 1-2 and Volume 2)

There were 208 premature decedents distributed throughout the groups as follows:

Sex	Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )			
	1 (0)	2 (100)	3 (300)	4 (1000)
♂	24/50	25/50	21/50	25/50
♀	29/50	34/50	24/50	26/50

There was no evidence to suggest that any of these deaths were due to administration of Glyphosate. There was no statistical evidence at any timepoint of any differential mortality between any of the groups receiving Glyphosate and the respective Controls in either sex.

Clinical Signs (Volume 2)Males and Females

There were no notable intergroup differences in either sex.

The clinical signs seen were distributed equally throughout all groups, and included emaciation, a hunched posture, subdued behaviour and exophthalmic eyes. These are considered to be typical for mice of this age and strain in a study of this type and duration.

There were no notable intergroup differences in the incidences of externally palpable masses.

Body Weight (Table 1, Figures 3-4 and Appendix 7)Males and Females

A slight decrease in absolute body weight at Week 40 was evident in all groups of both sexes except Control and Intermediate dose females. This transient effect is not considered to be attributable to administration of Glyphosate.

All groups receiving Glyphosate showed a comparable weight gain to that of their respective Controls.

Food Consumption (Table 2 and Appendix 8)Males and Females

All groups receiving Glyphosate showed a comparable total food consumed to that of their respective Controls.

Water ConsumptionMales and Females

Visual assessment revealed no notable intergroup differences in either sex.

Achieved Dosages (Table 3)

Group mean achieved dosages in mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup> are presented for the whole study. These were generally close to nominal ( $\pm 2\%$ ).

Analyses of Formulated Diets (Appendix 5)

Periodic analyses of diets showed that an acceptable degree of accuracy ( $\pm 10\%$ ) was achieved, with the exception of 2 instances where deviation of the mean from the theoretical concentration exceeded  $\pm 10\%$  (Group 2♀ - Week 62: +248% and Group 3♀ - Week 93: -10.1%). The deviation for Group 2♀ (Week 62) was considered to have occurred as a result of sampling for Group 3♂ instead of Group 2♀ in error. The next (from Week 64) formulation was subsequently analysed, which also showed the deviation of the mean from the theoretical concentration to exceed  $\pm 10\%$  (-11.4%). The next formulation was not subsequently analysed due to a technical error. The deviation for Group 3♀ (Week 93) only just exceeded target levels of  $\pm 10\%$  (-10.1%) and was not considered to affect the integrity of the study. Therefore it was not considered necessary to analyse the next formulation.

LABORATORY INVESTIGATIONSDifferential Blood Counts (Tables 4-9, Appendices 8-13)Males and FemalesWeeks 52, 77 and 102

There were no notable intergroup differences in either sex at any timepoint.

TERMINAL STUDIESOrgan Weights (Tables 10-13, Appendices 14-15)Males

Absolute thymus weight was increased in the Intermediate and High dose groups ( $P<0.01$  and  $P<0.05$  respectively) compared to Control. Thymus weight was also increased in the Intermediate and High dose groups ( $P<0.05$  and  $P<0.01$  respectively) after covariance analysis.

There were no other notable intergroup differences.

Females

There were no notable intergroup differences.

Necropsy Findings (Table 14, Volume 2)Males

The incidence of lung masses was slightly higher in the High dose group (18/50) compared to Control (10/50).

There were no other findings noted at necropsy that could be related to treatment with Glyphosate.

Females

There were no findings noted at necropsy that could be related to treatment with Glyphosate.

Histological Findings (Tables 15-16, Volume 2)

Non-Neoplastic Findings

Males

The incidence of increased mineral deposits in the brain was higher in the High dose group (13/50, P<0.05) compared to Control (4/49).

All other statistically significant findings were considered to be typical background changes commonly seen in mice of this age and strain at IRI.

Females

There were no notable intergroup differences.

Neoplastic Findings

Males and Females

There were no statistically significant increases in incidence of any tumour.

The number of animals with tumours, both benign and malignant, was similar between the Control and High dose

groups of both sexes. However, the number of animals with multiple tumour types was slightly increased in the High dose group of both sexes (males: 16/50 and females: 11/50) compared to Control (males: 11/50 and females: 6/50). This led to a slight increase in the total number of tumours in the High dose group of both sexes (males: 60 and females: 43) compared to Control (males: 49 and females: 36).

Haemangiosarcoma was evident in 4/50 High dose males, 2/50 Low dose females and 1/50 High dose females (not significant) compared to the respective Controls (both 0/50).

Histiocytic sarcoma in the lymphoreticular/haemopoietic tissue was evident in 2 Low and 2/50 High dose males and 3 Low, 3 Intermediate and 1/50 High dose females (not significant) compared to the respective Controls (both 0/50).

Other tumours seen were considered to be typical for mice of this age and strain due to the very low incidence of occurrence and were not considered to be due to administration of Glyphosate.

DISCUSSION AND CONCLUSION

There was no evidence of any in-life toxicity or carcinogenic potential due to administration of Glyphosate.

The increased thymus weight seen in Intermediate and High dose males was not associated with any findings at necropsy or after histological evaluation. The increase in High dose males was due to one animal which had an enlarged thymus infiltrated with lymphoma cells. Due to the slight magnitude of the increase seen, the lack of a dose relationship, the lack of an effect in females and the lack of any associated histological changes, the increases are considered to be chance effects.

The higher incidence of increased mineral deposits in the brain in High dose males is a commonly reported lesion in mice of this age and strain (Morgan K T, *et al*, 1982). Due to the lack of an increase in severity, this finding is not likely to be due to administration of Glyphosate.

Although there was an increase in incidence of lung masses in High dose males at necropsy there was little difference between the groups in the numbers of tumours after histological evaluation. Therefore the necropsy finding is considered to be due to chance.

It was noted that there was a slight increase in the number of animals in the High dose group of both sexes having multiple tumour types, which led to an overall increase in the total number of tumours in these groups. Due to the lack of histological evidence of an increase in incidence in any tumour type, the slight magnitude of the effect and the lack of statistical significance, these are considered to be chance effects.

It was apparent that the incidences of haemangiosarcoma and histiocytic sarcoma were higher in all groups of both sexes receiving

Glyphosate than their respective Controls. Similar incidences of haemangiosarcoma and histiocytic sarcoma have been seen in other studies using mice of a similar age and strain conducted at IRI (see Appendix 17). Due to the lack of a dose relationship, the lack of statistical significance and the incidences in this study falling within the background ranges, these changes are not considered to be due to administration of Glyphosate.

In conclusion, dosing CD-1 mice for 104 weeks with up to 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup> produced no signs of carcinogenic potential at any dose level.

TABLE 1

Glyphosate  
104 Week Dietary Carcinogenicity Study in Mice  
Body Weight (g): Group Mean Values

Treatment Period (Weeks)	Dose Group/Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )							
	1♂ (0)	2♂ (100)	3♂ (300)	4♂ (1000)	1♀ (0)	2♀ (100)	3♀ (300)	4♀ (1000)
Pretrial -2	27.050	26.850	26.550	26.550	21.450	a21.650	21.150	21.350
Pretrial -1	29.3	28.9	28.9	29.4	22.0	a22.3	21.9	21.9
0	31.0	30.3	30.8	31.4	23.3	23.8	23.2	23.5
1	32.2	31.5	32.2	33.1	23.7	24.2	*24.5	**24.9
2	32.2	32.6	33.1	***33.9	24.8	25.4	25.6	**26.2
3	33.2	33.9	34.1	***35.1	25.649	26.0	26.2	26.7
4	34.5	34.7	35.0	***36.3	26.8	27.0	27.5	27.1
5	35.5	35.8	35.6	36.4	27.0	26.8	26.9	27.4
6	35.6	36.1	36.2	37.2	27.6	27.5	27.4	28.2
7	35.5	36.5	*36.9	***37.9	27.6	27.5	27.7	28.2
8	35.7	36.9	*37.3	***38.2	28.0	28.2	28.3	**29.0
9	36.8	37.9	37.9	**38.9	28.6	28.5	28.6	29.3
10	37.5	38.4	38.4	39.2	29.0	29.1	29.1	29.6
11	37.7	39.1	38.9	**39.8	29.9	29.3	30.2	30.4
12	38.1	39.4	39.3	**40.6	29.7	b29.849	29.7	30.4
13	38.1	*39.8	*39.8	***40.9	30.3	30.2	30.2	31.2
16	38.6	40.2	*40.6	***41.749	31.2	31.6	31.249	32.2
20	39.8	*41.849	41.2	**42.6	32.148	32.8	32.6	33.6
24	40.749	42.6	42.3	**43.7	33.1	33.8	33.1	34.8
28	41.5	43.6	*43.8	***45.247	33.9	34.3	33.947	35.149
32	42.648	44.548	43.8	**45.7	35.0	35.4	34.4	36.048
36	43.6	44.8	44.2	46.3	35.2	35.9	34.5	36.8

Numbers in superscript indicate number of survivors at the end of that and subsequent timepoints

\* = Significantly different from Control, P<0.05  
 \*\* = Significantly different from Control, P<0.01  
 \*\*\* = Significantly different from Control, P<0.001

a = Animal No. 274♀ replaced by Animal No. 401♀ during Pretrial due to it dying prior to the start of dosing therefore body weight for Animal No. 274♀ deleted from group means  
 b = Animal missing from cage, presumed dead

TABLE 1 (continued)  
Body Weight (g); Group Mean Values

Treatment Period (Weeks)	Dose Group/Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )							
	1♂ (0)	2♂ (100)	3♂ (300)	4♂ (1000)	1♀ (0)	2♀ (100)	3♀ (300)	4♀ (1000)
40	42.8	44.2	43.3	44.8	35.7	35.8	34.6	35.5
44	43.9	45.947	45.3	46.546	36.9	37.2	35.5	37.0
48	43.3	45.346	43.8	**46.445	37.3	36.5	35.646	37.2
52	43.146	*45.6	44.2	**46.8	36.9	36.648	35.645	37.2
56	43.645	45.845	45.1	**47.244	37.6	37.247	36.6	38.0
60	44.043	46.443	45.049	47.1	37.147	37.346	35.743	37.7
64	43.942	45.942	44.848	47.242	37.3	37.945	36.042	38.647
68	44.538	46.741	45.247	47.440	38.043	39.242	37.1	39.646
72	44.837	47.040	45.445	46.838	38.240	38.539	37.740	39.343
76	44.836	47.0	45.942	47.836	38.237	39.035	37.238	39.742
80	45.334	46.838	46.141	48.235	38.636	38.531	37.4	39.540
84	46.132	46.837	47.038	47.934	39.433	38.629	38.0	40.438
88	46.3	47.936	47.0	47.4	39.629	40.026	38.1	40.236
92	45.030	46.434	47.136	45.632	37.628	38.523	37.436	38.932
96	44.029	44.231	46.034	44.228	36.826	38.021	38.035	38.127
100	43.727	43.527	45.3	43.827	36.723	38.216	37.630	38.4
104	43.826	43.425	45.229	44.425	38.221	37.9	37.926	38.724
Weight Gain (g) Time 0-Week 104	12.8	13.1	14.4	13.0	14.9	14.1	14.7	15.2
% of Control	-	102	113	102	-	95	99	102

Numbers in superscript indicate number of survivors at the end of that and subsequent timepoints

\* = Significantly different from Control, P<0.05

\*\* = Significantly different from Control, P<0.01

**TABLE 2**  
**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Food Consumption (g.mouse<sup>-1</sup>.week<sup>-1</sup>): Group Mean Values**

Treatment Period (Weeks)	Dose Group/Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )							
	1♂ (0)	2♂ (100)	3♂ (300)	4♂ (1000)	1♀ (0)	2♀ (100)	3♀ (300)	4♀ (1000)
Pretrial -2	a5250	5450	5350	5250	5350	ab5550	5350	5350
Pretrial -1	53	53	54	54	51	b39	51	38
1	50	50	52	50	44	50	43	43
2	54	53	53	51	a47	47	49	48
3	52	53	54	52	5449	55	55	a55
4	52	52	50	49	42	50	44	45
5	46	51	50	52	41	42	42	44
6	49	49	48	46	47	47	41	42
7	52	51	50	50	43	45	45	45
8	50	50	50	48	51	54	52	46
9	51	50	50	49	45	39	43	45
10	48	47	a48	47	41	43	45	47
11	48	46	47	47	45	47	45	47
12	46	47	47	47	42	c4449	45	46
13	45	45	44	44	44	45	45	48
16	42	40	40	4149	a44	45	4549	47
20	41	4049	41	41	4448	46	42	55
24	4449	44	44	44	43	45	42	46
28	38	37	37	3947	37	35	3747	3949
32	a3948	3748	36	38	33	35	34	3448
36	39	38	38	39	33	36	34	35

Numbers in superscript indicate number of survivors at the end of that and subsequent timepoints  
Data derived from singly housed mice

a = One animal excluded due to technical error

b = Animal No. 2749 replaced by Animal No. 4019 during Pretrial due it dying prior to the start of dosing therefore food consumption for Animal No. 2749 deleted from group means

c = Animal missing from cage, presumed dead

TABLE 2 (continued)  
 Food Consumption (g.mouse<sup>-1</sup>.week<sup>-1</sup>): Group Mean Values

Treatment Period (Weeks)	Dose Group/Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )							
	1♂ (0)	2♂ (100)	3♂ (300)	4♂ (1000)	1♀ (0)	2♀ (100)	3♀ (300)	4♀ (1000)
40	40	41	39	42	39	46	46	45
44	43	42 <sup>47</sup>	41	43 <sup>46</sup>	43	41	42	45
48	43	43 <sup>46</sup>	44	a <sup>45</sup> 45	45	46	46 <sup>46</sup>	45
52	41 <sup>46</sup>	44	42	45	44	44 <sup>48</sup>	45 <sup>45</sup>	43
56	46 <sup>45</sup>	46 <sup>45</sup>	45	46 <sup>44</sup>	44	44 <sup>47</sup>	50	51
60	45 <sup>43</sup>	45 <sup>43</sup>	44 <sup>49</sup>	45	43 <sup>47</sup>	44 <sup>46</sup>	44 <sup>43</sup>	46
64	43 <sup>42</sup>	43 <sup>42</sup>	43 <sup>48</sup>	45 <sup>42</sup>	44	48 <sup>45</sup>	46 <sup>42</sup>	47 <sup>47</sup>
68	45 <sup>38</sup>	45 <sup>41</sup>	44 <sup>47</sup>	45 <sup>40</sup>	47 <sup>43</sup>	53 <sup>42</sup>	55	51 <sup>46</sup>
72	45 <sup>37</sup>	44 <sup>40</sup>	43 <sup>45</sup>	44 <sup>38</sup>	42 <sup>40</sup>	47 <sup>39</sup>	41 <sup>40</sup>	44 <sup>43</sup>
76	46 <sup>36</sup>	43	44 <sup>42</sup>	45 <sup>36</sup>	42 <sup>37</sup>	45 <sup>35</sup>	46 <sup>38</sup>	43 <sup>42</sup>
80	41 <sup>34</sup>	43 <sup>38</sup>	42 <sup>41</sup>	44 <sup>35</sup>	38 <sup>36</sup>	44 <sup>31</sup>	43	44 <sup>40</sup>
84	44 <sup>32</sup>	43 <sup>37</sup>	43 <sup>38</sup>	44 <sup>34</sup>	41 <sup>33</sup>	46 <sup>29</sup>	46	40 <sup>38</sup>
88	45	45 <sup>36</sup>	43	47	40 <sup>29</sup>	45 <sup>26</sup>	41	44 <sup>36</sup>
92	42 <sup>30</sup>	41 <sup>34</sup>	44 <sup>36</sup>	42 <sup>32</sup>	42 <sup>28</sup>	43 <sup>23</sup>	43 <sup>36</sup>	44 <sup>32</sup>
96	42 <sup>29</sup>	41 <sup>31</sup>	45 <sup>34</sup>	45 <sup>28</sup>	39 <sup>26</sup>	41 <sup>21</sup>	38 <sup>35</sup>	46 <sup>27</sup>
100	42 <sup>27</sup>	40 <sup>27</sup>	43	42 <sup>27</sup>	38 <sup>23</sup>	47 <sup>16</sup>	42 <sup>30</sup>	42
104	43 <sup>26</sup>	40 <sup>25</sup>	43 <sup>29</sup>	43 <sup>25</sup>	37 <sup>21</sup>	45	41 <sup>26</sup>	41 <sup>24</sup>
Total Food Consumed (g) (Weeks 1-104)	4517	4464	4475	4567	4310	4607	4505	4622
% of Control	-	99	99	101	-	107	105	107

Numbers in superscript indicate number of survivors at the end of that and subsequent timepoints  
 Data derived from singly housed mice  
 a = One animal excluded due to technical error

TABLE 3

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Achieved Dosages (mg.kg<sup>-1</sup>.day<sup>-1</sup>): Group Mean Values**

Treatment Period (Weeks)	Group Dose/Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )					
	2♂ (100)	3♂ (300)	4♂ (1000)	2♀ (100)	3♀ (300)	4♀ (1000)
1	90	282	900	104	263	864
2	104	309	973	120	334	1141
3	100	297	985	117	330	1142
4	98	274	909	92	242	835
5	97	291	1044	93	266	940
6	94	278	905	111	288	931
7	101	306	1019	102	322	1048
8	99	303	975	118	353	1032
9	97	294	993	75	254	968
10	93	286	965	104	301	1035
11	95	292	971	111	302	996
12	101	296	985	96	309	979
13	96	282	930	99	297	1034
14-16	88	265	900	99	301	1013
17-20	91	295	964	104	279	1152
21-24	109	323	1082	99	285	891
25-28	86	258	908	78	258	804
29-32	88	266	912	90	261	804
33-36	103	307	1017	104	288	964

Achieved dosages calculated from theoretical dietary concentrations but actual body weight and food consumption data

TABLE 3 (continued)

Achieved Dosages ( $\text{mg} \cdot \text{kg}^{-1} \cdot \text{day}^{-1}$ ): Group Mean Values

Treatment Period (Weeks)	Group Dose/Level ( $\text{mg Glyphosate} \cdot \text{kg}^{-1} \cdot \text{day}^{-1}$ )					
	2♂ (100)	3♂ (300)	4♂ (1000)	2♀ (100)	3♀ (300)	4♀ (1000)
37-40	110	320	1115	130	333	1323
41-44	107	314	1048	98	343	1248
45-48	107	340	1098	110	344	1023
49-52	103	295	1032	95	293	948
53-56	104	309	1027	96	325	1144
57-60	100	310	998	101	291	988
61-64	96	293	988	108	290	954
65-68	103	302	1005	110	359	1085
69-72	101	299	977	96	247	924
73-76	96	304	994	95	288	940
77-80	98	293	1004	97	298	1010
81-84	99	296	993	105	317	914
85-88	103	308	1076	99	278	1023
89-92	94	304	933	95	304	1017
93-96	96	310	1016	92	266	1043
97-100	92	290	946	112	314	914
101-104	97	293	975	104	302	941
Mean	98	297	988	102	298	1000
± S.D.	6	17	56	11	30	113
% of Nominal	98	99	99	102	99	100

Achieved dosages calculated from theoretical dietary concentrations but actual body weight and food consumption data

TABLE 4

Glyphosate  
 104 Week Dietary Carcinogenicity Study in Mice  
 Differential Blood Counts: During Week 52  
 Group Mean Values: Males

Group/Dose Level (mg Glyphosate, kg <sup>-1</sup> .day <sup>-1</sup> )		Differential (%)			
		Neut	Lymph	Mono	Eos
1 (0)	Number	46	46	46	46
	Mean	41	52	3	4
	S.D.	9	10	3	4
4 (1000)	Number	42	42	42	42
	Mean	42	51	4	3
	S.D.	10	11	3	2

TABLE 5

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Differential Blood Counts: During Week 77**  
**Group Mean Values: Males**

Group/Dose Level (mg Glyphosate. kg <sup>-1</sup> .day <sup>-1</sup> )		Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	Number	36	36	36	36
	Mean	43	52	1	4
	S.D.	12	11	2	3
4 (1000)	Number	36	36	36	36
	Mean	45	51	1	3
	S.D.	11	11	1	2

TABLE 6

**Glyphosate**  
 104 Week Dietary Carcinogenicity Study in Mice  
 Differential Blood Counts: During Week 102  
 Group Mean Values: Males

Group/Dose Level (mg Glyphosate. kg <sup>-1</sup> .day <sup>-1</sup> )		Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	Number	27	27	27	27
	Mean	45	50	2	3
	S.D.	14	14	1	3
4 (1000)	Number	26	26	26	26
	Mean	48	47	1	3
	S.D.	16	15	1	4

TABLE 7

**Glyphosate**  
 104 Week Dietary Carcinogenicity Study in Mice  
 Differential Blood Counts: During Week 52  
 Group Mean Values: Females

Group/Dose Level (mg Glyphosate. kg <sup>-1</sup> .day <sup>-1</sup> )		Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	Number	48	48	48	48
	Mean	42	47	7	4
	S.D.	10	9	4	3
4 (1000)	Number	48	48	48	48
	Mean	42	49	6	2
	S.D.	13	14	4	2

TABLE 8

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Differential Blood Counts: During Week 77**  
**Group Mean Values: Females**

Group/Dose Level (mg Glyphosate. kg <sup>-1</sup> .day <sup>-1</sup> )		Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	Number	37	37	37	37
	Mean	49	47	1	3
	S.D.	11	11	1	3
4 (1000)	Number	42	42	42	42
	Mean	49	48	1	2
	S.D.	10	10	1	3

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TABLE 9

Glyphosate  
 104 Week Dietary Carcinogenicity Study in Mice  
 Differential Blood Counts: During Week 102  
 Group Mean Values: Females

Group/Dose Level (mg Glyphosate, kg <sup>-1</sup> .day <sup>-1</sup> )		Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	Number	19	19	19	19
	Mean	51	46	2	1
	S.D.	14	12	2	2
4 (1000)	Number	26	26	26	26
	Mean	46	50	1	2
	S.D.	17	16	1	3

TABLE 10  
**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Absolute Organ Weights (g)**  
**Group Mean Values: Males**

Group/Dose Level (mg Glyphosate. kg <sup>-1</sup> .day <sup>-1</sup> )		Body Weight (g)	Adrenals	Brain	Heart	Kidneys	Liver	Lungs	Sal 1	Pituitary	Prostate	Sal 2	Spleen	Testes	Thymus
1 (0)	Number Mean S.D.	10 41 5	10 0.007 0.004	9 0.50 0.02	9 0.25 0.02	10 0.82 0.09	10 2.70 0.89	10 0.30 0.07	10 0.08 0.03	9 0.002 0.001	10 0.05 0.03	10 0.27 0.06	10 0.11 0.06	10 0.34 0.08	10 0.02 0.01
2 (100)	Number Mean S.D. Prob.	10 43 3	10 0.005 0.002	10 0.50 0.03	10 0.24 0.02	10 0.89 0.21	10 2.64 0.82	10 0.31 0.15	10 0.11 0.07	10 0.002 0.001	10 0.06 0.03	10 0.28 0.06	10 0.11 0.07	10 0.36 0.05	10 0.02 0.01
3 (300)	Number Mean S.D. Prob.	10 45 6	10 0.005 0.003	10 0.49 0.02	10 0.26 0.03	10 0.87 0.11	10 2.92 1.28	10 0.33 0.10	10 0.11 0.07	10 0.002 0.001	10 0.05 0.02	10 0.24 0.06	10 0.14 0.10	10 0.36 0.05	10 0.03 **
4 (1000)	Number Mean S.D. Prob.	10 39 5	9 0.004 0.001	10 0.50 0.04	10 0.24 0.02	10 0.89 0.29	10 3.18 1.69	10 0.33 0.12	10 0.09 0.06	10 0.005 0.009	10 0.04 0.02	10 0.24 0.07	10 0.27 0.34	10 0.35 0.06	10 0.03 *

Sal 1 = Parotid salivary glands

Sal 2 = Sublingual and submaxillary salivary glands

\* = Significantly different from Control, P<0.05

\*\* = Significantly different from Control, P<0.01

TABLE 11  
**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Organ Weights (Covariance Analysis)**  
**Group Mean Values: Males**

Group/Dose Level (mg Glyphosate. kg <sup>-1</sup> .day <sup>-1</sup> )		Body Weight (g)	Adrenals	Brain	Heart	Kidneys	Liver	Lungs	Sal 1	Pituitary	Prostate	Sal 1	Spleen	Testes	Thymus
1 (0)	Number	10	10	9	9	10	10	10	10	9	10	10	10	10	10
	Mean	42	0.007	0.50	0.25	0.83	2.71	0.30	0.08	0.002	0.06	0.27	0.12	0.35	0.02
	S.E.	2	0.001	0.01	0.01	0.06	0.39	0.04	0.02	0.001	0.01	0.02	0.06	0.02	0.01
2 (100)	Number	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	Mean	42	0.005	0.50	0.24	0.88	2.62	0.31	0.11	0.002	0.05	0.27	0.10	0.36	0.02
	S.E.	2	0.001	0.01	0.01	0.06	0.39	0.04	0.02	0.001	0.01	0.02	0.06	0.02	0.01
3 (300)	Number	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	Mean	42	0.005	0.49	0.25	0.84	2.89	0.34	0.11	0.003	0.04	0.23	0.11	0.35	0.03
	S.E.	2	0.001	0.01	0.01	0.06	0.41	0.04	0.02	0.001	0.01	0.02	0.06	0.02	0.01
4 (1000)	Number	10	9	10	10	10	10	10	10	10	10	10	10	10	10
	Mean	42	0.004	0.50	0.25	0.91	3.21	0.32	0.09	0.004	0.05	0.24	0.29	0.36	0.04
	S.E.	2	0.001	0.01	0.01	0.06	0.41	0.04	0.02	0.001	0.01	0.02	0.06	0.02	0.01
	Prob.														**

Sal 1 = Parotid salivary glands

Sal 2 = Sublingual and submaxillary salivary glands

\* = Significantly different from Control, P<0.05

\*\* = Significantly different from Control, P<0.01

**TABLE 12**  
**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Absolute Organ Weights (g)**  
**Group Mean Values: Females**

Group/Dose Level (mg Glyphosate kg <sup>-1</sup> .day <sup>-1</sup> )		Body Weight (g)	Adrenals	Brain	Heart	Kidneys	Liver	Lungs	Ovaries	Sal 1	Pituitary	Sal 2	Spleen	Thymus	Uterus
1 (0)	Number Mean S.D.	10 37 6	10 0.009 0.004	10 0.51 0.02	10 0.20 0.04	10 0.51 0.07	10 1.95 0.41	10 0.27 0.05	10 0.373 0.568	10 0.07 0.03	10 0.002 0.001	10 0.15 0.02	10 0.18 0.12	10 0.02 0.01	10 2.16 2.13
2 (100)	Number Mean S.D. Prob.	10 35 5	10 0.008 0.003	10 0.52 0.03	10 0.19 0.02	10 0.51 0.06	10 1.78 0.28	10 0.27 0.07	10 0.426 0.485	10 0.08 0.03	10 0.003 0.002	10 0.14 0.03	10 0.12 0.06	10 0.05 0.05	10 1.24 0.98
3 (300)	Number Mean S.D. Prob.	10 36 5	10 0.008 0.003	10 0.51 0.03	10 0.21 0.05	10 0.53 0.08	10 1.71 0.35	10 0.28 0.09	8 0.453 0.465	10 0.08 0.04	8 0.004 0.003	10 0.14 0.03	10 0.13 0.04	10 0.04 0.03	10 1.54 2.62
4 (1000)	Number Mean S.D. Prob.	10 38 5	10 0.010 0.003	10 0.50 0.03	10 0.20 0.03	10 0.54 0.07	10 1.97 0.41	10 0.27 0.07	9 0.498 0.446	10 0.06 0.02	9 0.002 0.001	10 0.17 0.02	10 0.15 0.07	10 0.06 0.08	10 1.65 2.14

Sal 1 = Parotid salivary glands

Sal 2 = Sublingual and submaxillary salivary glands

TABLE 13  
**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Organ Weights (Covariance Analysis)**  
**Group Mean Values: Females**

Group/Dose Level (mg Glyphosate kg <sup>-1</sup> .day <sup>-1</sup> )		Body Weight (g)	Adrenals	Brain	Heart	Kidneys	Liver	Lungs	Ovaries	Sal 1	Pituitary	Sal 2	Spleen	Thymus	Uterus
1 (0)	Number Mean S.E. Prob.	10 37 2	10 0.009 0.001	10 0.51 0.01	10 0.20 0.01	10 0.51 0.02	10 1.93 0.10	10 0.27 0.02	10 0.379 0.160	10 0.07 0.01	10 0.002 0.001	10 0.15 0.01	10 0.18 0.03	10 0.02 0.02	10 2.11 0.64
2 (100)	Number Mean S.E. Prob.	10 37 2	10 0.008 0.001	10 0.52 0.01	10 0.19 0.01	10 0.52 0.02	10 1.83 0.10	10 0.27 0.02	10 0.421 0.160	10 0.08 0.01	10 0.003 0.001	10 0.14 0.01	10 0.12 0.03	10 0.05 0.02	10 1.39 0.65
3 (300)	Number Mean S.E. Prob.	10 37 2	10 0.008 0.001	10 0.51 0.01	10 0.21 0.01	10 0.53 0.02	10 1.73 0.10	10 0.29 0.02	8 0.446 0.179	10 0.08 0.01	8 0.004 0.001	10 0.14 0.01	10 0.13 0.03	10 0.04 0.02	10 1.58 0.64
4 (1000)	Number Mean S.E. Prob.	10 37 2	10 0.009 0.001	10 0.50 0.01	10 0.20 0.01	10 0.54 0.02	10 1.92 0.10	10 0.27 0.02	9 0.505 0.169	10 0.07 0.01	9 0.002 0.001	10 0.17 0.01	10 0.14 0.03	10 0.06 0.02	10 1.51 0.65

Sal 1 = Parotid salivary glands

Sal 2 = Sublingual and submaxillary salivary glands

TABLE 14

Glyphosate  
104 Week Dietary Carcinogenicity Study in Mice  
Incidence of Necropsy Findings : Males and Females

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
ALL ORGANS:									
NAD		2	3	2	1				3
GENERALISED CONDITION:									
Autolysed		6	8	3	4	2	2	4	3
Cyanosed			1			1	3		
Pale		1	1		2	2	1	1	2
Thin									
No data available							1		
ABDOMEN:									
Contains fluid		2		4	3	3	2	4	2
Dark patch(es)					1				
Cyanosed		4		2		3	6	3	2
Soft							1		
Firm		1	1	1	1		3	1	
Swollen		9	4	7	8	12	20	13	10
Mass(es)			1		2			1	
Contents severely autolysed				1					
Mesenteric fat firm					1				

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
ACCESSORY SEX GLAND(S):									
PREPUTIAL GLAND: enlarged			2						
ADRENALS:									
Both pale				1					
Left dark				2					
One/both enlarged					1				1
BONE:									
Rib mis-shapen									
Fracture									
Sternum mis-shapen				1					
BRAIN:									
Dark focus(i)								1	
CAECUM:									
Contains fluid							1		
Mucosa thickened						1			

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
CERVIX:									
Mass									
Dilated/enlarged									
Cyst(s)									
COAGULATING GLANDS:									
One/both enlarged		1	2		1				
DIAPHRAGM:									
Speckled				1					
Mass(es)							1		
EYES:									
Right encrusted					1				
Pale		1							
Both dark		1							
One/both protruding		2							
One/both opaque		5	2		1				
Right swollen				1					
Both dull			1		2				
Both dull					1				

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
GALL BLADDER:									
Dilated/enlarged		1			2		1	1	1
HARDERIAN GLAND:									
One/both enlarged		1	3	1	2		1		
HEAD:									
CRANIUM: mass Swollen			1	1					
HEART:									
Mass Left atrium pale Pale Flaccid Pale focus(s) Atrial enlargement			1	1		1		1	2
ILEUM:		1	2	1		1	1	2	1
Mass				1					

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
<b>ILEUM:</b>									
Dark focus(i)						1			
<b>INTESTINES:</b>									
Distended	1	1		1		1			
Dilated	1			1					1
Autolysed									
Distended with gas	1	1	1	1		1	1		
Thickened					1				
Contents abnormal									
<b>KIDNEYS:</b>									
Both have abnormal shape									
One/both pale	1	4	1	4	1	8	3	3	
Both have granular appearance	2	1	5		1	5			1
Both dark	1								
One/both enlarged	1		1	1	1				
Both cystic									
Left small			1						
One/both have depressed focus(i)			1	1					
Both have raised focus(i)									1
One/both have pale focus(i)	2	1		1	1				

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
<b>KIDNEYS:</b>									
One/both have dark focus(i)		1	2	1	1	2			
One/both have mass(es)		3	10	10	3	1	2	1	1
One/both have cyst(s)									
<b>LIVER:</b>									
Pale		2	1	1	4	3	2	2	1
Granular appearance									
Dark		1			1	7	1	2	1
Enlarged		1	1		1	2	2	1	
Prominent lobulation			1			1			
Raised focus(i)			1	1	1	2	2	1	
Dark focus(i)									
Pale focus(i)									
Mass(es)		15	16	15	15	2	2	2	1
Cyst(s)									
<b>LUNGS:</b>									
Spongy/froth filled		1		1	1	2	2	1	
Pale			1	2	1	2	2	2	1
Dark									
Firm									

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
<b>LUNGS:</b>									
Raised focus(s)		3	2	2	2	1	2	1	2
Dark focus(s)		1	1		1			1	3
Pale focus(s)		3	3	1	6	4	2	1	3
Dark focus(s)				1			1		
Mass(es)		10	13	12	18	6	3	3	7
Ahesion(s)						1			
<b>LYMPH NODE(S):</b>									
Many dark									
Individual node(s) dark									
Many enlarged									
LUMBAR: both enlarged		1		2	1	7	2	3	4
RENAL: both enlarged				1			6		
Individual node(s) enlarged		5	10	4	9	7	6	10	5
<b>MASS:</b>									
Subcutaneous mass(es)		1		2	4	5	1	4	3
Dermal mass(es)		1			2			1	

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
<b>MESENTERIC LYMPH NODE:</b>									
Mass									
Dark		4	1	4	1	2	3	1	1
Enlarged		1	2	4	6	4	6	3	3
Dark focus(s)						1			
Cyst(s)						1			
<b>MESENTERY:</b>									
Firm				1		1			
Thickened						1	1	1	
Mass(es)									
<b>OTHER SITES:</b>									
EAR(S): one/both encrusted		1	2	1	2		1		
EAR(S): both dark								1	
EAR(S): right missing		1		1					
EAR(S): both swollen									
EAR(S): left encrusted					1		1		
EARS: Right external canal prominent									
EXTREMITIES: pale		4		1		1		1	3
FOREFEET: right dark									
MOUTH: mass									1

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
OTHER SITES:									
MOUTH: Top teeth not evident									
PERIGENITAL AREA: swollen									
TAIL: withered at end									
TAIL: discoloured									
OVARIES:									
One has mass									
Both pale									
One/both enlarged									
Left has dark focus(s)									
One/both have cyst(s)									
PANCREAS:									
Mass									
Moist									
Pale									
Firm									
Thickened									
Cyst(s)									

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
PITUITARY:					1	1		2	1
Enlarged									
Raised focus(i)									
PROSTATE:				1	2				
Mass									
Dark focus(i)									
REPRODUCTIVE SYSTEM:									
PENIS: mass		1							
PENIS: protruding				3					
SALIVARY GLAND:									
Enlarged					1				
SEMINAL VESICLES:									
Both horns discoloured					1				
Both horns pale					1				
One/both horns enlarged		22	24	29	22				
Both horns small					1				

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
SEMINAL VESICLES:									
One/both horns dark or have dark focus(i)		3	1	4	6				
SKIN/SUBCUTIS:									
Scab(s)/encrusted		2	1	2	3	3			
Subcutaneous tissue moist		2	1	1	1	1	4	1	1
Moist									
Hair loss		4	4	2	3	2	1	3	1
Cyanosed									
Sore(s)		1						1	
Staining		1	1	1	1	6	7		
Mass(es)									
Left eyelids swollen				1					
SPLEEN:									
Dark patch(es)					1				
Pale								1	
Granular appearance							1		
Mottled appearance									
Enlarged		5	5	2	10	14	12	10	7
Depressed focus(i)									

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
SPLEEN:									
Raised focus(i)									
Pale focus(i)									
Focus(i)									
Mass(es)		1	1		3	2	1	2	
STERNUM:									
Mass(es)				1				2	
STOMACH:									
Mass in non-glandular region									
Mass									
Distended with gas									
Thickened in glandular region		2	5	2	4	2	2	2	1
Non-glandular mucosa thickened		1			1	1	1		
Thickened									
Raised focus(i)							1		
Dark focus(i) on glandular mucosa						1			
Dark focus(i) on mucosa						1			
Mass on serosa in glandular region						2			1

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
SUBMANDIBULAR LYMPH NODE:									
Dark									
One/both enlarged		3	2	1	4	6	1	1	1
TESTES:									
EPIDIDYMIS: one has mass									
Right has mass			1		1				
Both dark			1		1				
One/both flaccid		4		2	1				
EPIDIDYMIS: left enlarged									
Right has dark focus(i)									
One/both have pale focus(i)		1	2	4	3				
THORAX:									
Contains fluid		2	4	5	4	3	5	6	4
Mass(es)			1		1				
THYMUS:									
Mass		1						1	
Dark							2		
Enlarged/firm		3		2	4	6	6	4	10

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
THYMUS:					1				
Raised focus(i)									
Dark focus(i)							1		
THYROIDS:					1				
Dark									
TONGUE:								1	
Raised focus(i)									
TRACHEA:						1			
Contains fluid									
Froth filled								1	
URETER:				1					
Both dilated								1	
URINARY BLADDER:									1
Mass									

The absence of a numeral indicates that the finding specified was not identified.

TABLE 14 (continued)

FINDINGS	TREATMENT	INCIDENCE OF MACROSCOPIC FINDINGS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
URINARY BLADDER:									
Dilated		4	9	5	6				
Dark		2	2	1	1				
Wall thickened				1	1				
Dark focus(i)			1	1	1				
Contents abnormal			2		1				
Contains red fluid				1					
UTERUS:									
Right horn has abnormal shape									
One horn or body has mass									
One/both horns or body dilated									
Right horn dark									
Right horn firm									
One/both horns or body enlarged									
Horns/body have dark focus(i)									
One horn has cyst(s)									
VASCULAR SYSTEM:									
Blood thin		2		1	1	1	3	1	2

The absence of a numeral indicates that the finding specified was not identified.

TABLE 15

Glyphosate  
104 Week Dietary Carcinogenicity Study in Mice  
Incidence of Histological Findings : Males and Females

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
GENERALISED CONDITION:		(11)	(5)	(4)	(9)	(6)	(11)	(3)	(7)
Amyloidosis		6	1	1	7	3	7	1	5
ABDOMEN:			(1)		(2)	(1)			(1)
Haemorrhage(s)			0		1	0			0
Inflammation/fat necrosis			1		1	1			1
ACCESSORY SEX GLAND(S):			(1)	(1)	(1)				
PREPUTIAL GLAND: purulent inflammation/abscess(es)			1	1	1				
ADRENALS:		(50)	(23)	(21)	(48)	(50)	(32)	(24)	(50)
No abnormality detected		14	13	8	25*	4	1	4	6
Unilateral PHAECHROMOCYTOMA [M]		0	1	0	0	0	0	0	0
Unilateral subcapsular CORTICAL CARCINOMA [M]		0	1	0	0	0	1	0	0
Unilateral PHAECHROMOCYTOMA [B]		0	0	0	1	0	0	0	0
Unilateral CORTICAL ADENOMA [B]		1	0	0	0	0	0	0	0
Unilateral subcapsular CORTICAL ADENOMA [B]		0	1	2	0	1	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
ADRENALS:		(50)	(23)	(21)	(48)	(50)	(32)	(24)	(50)
Subcapsular hyperplasia		19	5	4	14	40	29	18	40
(Associated) subcapsular hyperplasia		0	1	1	0	1	0	0	0
Unilateral medullary hyperplasia		1	1	1	1	0	0	0	0
Focal cortical hyperplasia		0	0	0	2	0	1	0	0
Diffuse cortical hyperplasia		0	0	0	0	1	1	0	0
Unilateral focus(i) of subcapsular medullary cell(s)		1	0	0	0	0	0	0	0
Infiltration by lymphoma cells		1	0	0	2	3	2	1	1
Increased corticomedullary pigmented foamy cells		0	0	0	0	3	1	3	6
Unilateral focus(i) of cellular change (cortex)		1	0	0	0	0	0	0	0
Accessory cortical nodule(s)		1	0	0	1	2	4	2	7
Unilateral thrombus		0	0	0	0	1	0	0	0
Unilateral inflammatory cell infiltrate		0	0	0	0	0	0	1	0
Focal/diffuse cortical hypertrophy		14	1	5	6	1	0	0	0
Focal cortical degeneration		0	1	0	2	0	0	0	0
Congestion		0	1	0	0	0	0	0	0
Amyloidosis		6	1	1	2	3	5	1	3

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
AORTA:		(50)	(24)	(20)	(50)	(48)	(32)	(24)	(50)
No abnormality detected	49	24	20	48	45	30	20	48	
Lymphoma cells in surrounding tissue	1	0	0	2	3	2	4	2	
BONE:					(2)			(1)	
Metastasising OSTEOSARCOMA [M]					0			1	
BRAIN:		(49)	(24)	(21)	(50)	(50)	(33)	(24)	(50)
No abnormality detected	44	20	14	36*	40	28	18	39	
MENINGIOMA [B]	0	0	1	0	0	0	0	0	
Compression by pituitary	0	0	0	0	1	0	0	1	
Meningeal infiltration by lymphoma cells	1	0	0	0	2	1	2	1	
Mineral deposit(s)	4	4	7	13*	4	4	5	8	
Meningeal inflammatory cell infiltrate	0	0	1	0	1	0	0	0	
Focus(i) of bacterial inflammation	0	0	0	0	0	0	0	1	
Cerebral haemorrhage(s)	0	0	0	0	1	0	0	0	
Ventricular dilatation	0	0	0	1	0	0	0	0	
Cerebral cyst(s)	0	0	0	0	1	0	0	0	

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
CAECUM:		(42)	(18)	(16)	(41)	(47)	(33)	(22)	(49)
No abnormality detected		38	18	16	39	43	29	22	45
Mucosal hyperplasia		0	0	0	0	1	0	0	1
Infiltration by lymphoma cells		1	0	0	1	2	0	0	0
Submucosal oedema		3	0	0	0	1	4	0	1
Mucosal necrosis with/without inflammation		0	0	0	1	0	0	0	1
Amyloidosis		0	0	0	0	0	1	0	0
CERVIX:						(2)			(2)
Dilatation/cyst(s)						2			2
COAGULATING GLANDS:		(1)	(1)		(1)				
Dilated		1	1		1				
Inflammation		0	1		1				
COLON:		(47)	(21)	(19)	(48)	(49)	(33)	(23)	(49)
No abnormality detected		44	21	19	48	48	32	23	49
Infiltration by lymphoma cells		1	0	0	0	1	1	0	0
Submucosal oedema		2	0	0	0	0	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
DIAPHRAGM:		(1)	(1)			(1)		(1)	
Chronic inflammatory cell infiltrate		0	0			1		0	
Contains secondary tumour		1	1			0		1	
DUODENUM:	(45)	(17)	(16)	(44)	(49)	(31)	(19)	(48)	
No abnormality detected	39	17	16	39	45	28	18	44	
Infiltration by lymphoma cells	1	0	0	1	1	0	1	1	
Inflammation in muscle layer	0	0	0	0	0	1	0	0	
Amyloidosis	4	0	0	4	3	3	0	3	
Submucosal focus of pancreatic tissue	1	0	0	0	0	0	0	0	
EYES:	(7)	(1)	(1)	(2)	(3)	(1)	(2)	(2)	
No abnormality detected	6	1	1	1	3	1	2	2	
Unilateral keratitis	1	0	0	1	0	0	0	0	
GALL BLADDER:	(44)	(45)	(43)	(41)	(44)	(43)	(44)	(46)	
No abnormality detected	40	42	37	37	30	36	34	37	
Mucosal hyperplasia	0	1	0	0	0	0	1	0	
Mesothelial hyperplasia	0	0	0	0	1	0	0	0	
Infiltration by lymphoma cells	1	0	0	1	2	4	4	2	

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
GALL BLADDER:		(44)	(45)	(43)	(41)	(44)	(43)	(44)	(46)
Dilated		2	2	3	3	12	3*	5	7
Inflammation		1	0	1	0	0	0	0	1
Cyst(s)		0	0	1	0	0	0	0	0
Contains secondary tumour		0	0	1	0	0	0	0	0
HARDERIAN GLAND:		(1)	(2)		(2)				
Unilateral ADENOMA [8]		1	1		2				
Unilateral bacterial abscess(es)		0	1		0				
HEART:		(50)	(25)	(21)	(50)	(50)	(33)	(24)	(50)
No abnormality detected		27	14	12	27	36	19	12	31
Infiltration by histiocytic cells		0	2	0	0	0	0	1	0
Infiltration by lymphoma cells		2	0	0	4	4	4	5	3
Cardiomyopathy with/without necrosis		17	6	5	14	6	5	0	5
Myocardial mineral deposit(s)		0	0	0	0	0	0	1	0
Widespread myocardial vacuolation		1	0	0	0	0	0	0	0
Atrial thrombosis		2	1	2	0	1	1	2	3
Perivasculitis		5	2	2	2	3	2	1	5
Inflammatory changes		2	0	3	3	0	2	1	5
Haemorrhage(s)		0	0	0	1	0	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
HEART:		(50)	(25)	(21)	(50)	(50)	(33)	(24)	(50)
Focal fibrosis		1	1	1	0	0	0	0	0
Valvular bacterial endocarditis		0	0	0	0	1	0	0	2
Amyloidosis		3	0	0	0	0	0	1	0
Epicardial lymphoid cell(s)		0	0	0	0	1	1	1	0
Contains secondary tumour		0	0	1	1	0	1	0	0
ILEUM:		(43)	(19)	(16)	(41)	(45)	(32)	(22)	(48)
No abnormality detected		36	17	16	35	40	25	21	42
Infiltration by lymphoma cells		1	1	0	0	1	1	0	1
Amyloidosis		6	1	0	6	3	6	1	5
JEJUNUM:		(43)	(19)	(18)	(45)	(48)	(30)	(20)	(48)
No abnormality detected		37	18	18	41	45	26	20	44
Infiltration by lymphoma cells		1	0	0	1	1	1	0	0
Amyloidosis		5	1	0	3	2	3	0	4
KIDNEYS:		(50)	(50)	(50)	(50)	(50)	(49)	(50)	(50)
No abnormality detected		8	2	6	4	11	7	9	2*
Unilateral TUBULAR CARCINOMA [M]		1	1	0	0	0	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
KIDNEYS:		(50)	(50)	(50)	(50)	(50)	(49)	(50)	(50)
Unilateral TUBULAR ADENOMA [B]		1	1	0	0	0	0	0	0
Unilateral focus(i) of tubular hyperplasia		1	0	0	0	0	1	0	0
Unilateral focal urothelial hyperplasia		1	0	0	0	0	0	0	0
Infiltration by histiocytic cells		0	1	0	1	0	2	3	0
Infiltration by lymphoma cells		2	0	1	4	10	9	8	8
Unilateral focus(i) of fat cell(s)		0	0	0	1	0	0	0	0
Basophilic tubules		5	5	7	3	1	2	4	4
Focal tubular atrophy		2	5	5	5	6	3	3	5
Tubular dilatation		1	0	2	4	1	3	3	0
Pelvic dilatation		1	1	2	1	1	4	2	1
Papillary necrosis		1	0	1	0	0	1	1	0
Focal nephritis		0	2	0	0	0	0	0	1
Mineral deposit(s)		2	4	2	4	0	0	0	0
Cortical tubular pigment deposit(s)		0	1	2	0	0	1	1	1
Cortical tubular-cell vacuolation		0	0	0	0	0	1	0	0
Unilateral thrombus		0	0	0	1	0	0	0	0
Unilateral chronic capsular thickening		0	0	0	1	0	0	0	0
Pyelitis		0	1	0	1	0	0	0	0
Perivasculitis		1	4	1	3	1	0	0	0
Nephropathy		31	34	28	27	26	16	25	27
Unilateral coagulative necrosis		0	0	0	2	0	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
KIDNEYS:		(50)	(50)	(50)	(50)	(50)	(49)	(50)	(50)
Interstitial/perivascular lymphoid focus(i)		3	5	4	6	5	10	3	10
Tubular hypertrophy		0	1	2	0	0	0	0	0
Cortical tubular eosinophilic droplet(s)		0	0	0	0	0	1	2	0
Cyst(s)		11	21	22*	15	5	11	3	9
Congestion		0	0	0	1	0	0	0	0
Amyloidosis		6	2	1	3	3	5	1	3
Contains secondary tumour		0	0	1	1	0	1	0	0
LIVER:		(50)	(50)	(50)	(50)	(50)	(49)	(50)	(50)
No abnormality detected		17	21	16	12	17	12	15	20
HEPATOCELLULAR CARCINOMA(TA) [M]		8	5	6	7	1	0	0	0
HEPATOCELLULAR ADENOMA(TA) [B]		8	12	11	9	1	0	2	0
(Associated) HEPATOCELLULAR ADENOMA(TA) [B]		1	1	4	4	0	0	0	0
Infiltration by histiocytic cells		0	2	0	1	0	3	3	0
Infiltration by lymphoma cells		2	0	1	5	9	8	8	5
Focal oval-cell hyperplasia		0	0	0	1	0	0	0	0
Hepatocyte atypia		0	1	1	1	0	0	0	1
Contains haemangiosarcoma		0	0	0	3	0	0	0	1
Hepatocyte rarefaction		3	1	0	1	0	2	2	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
LIVER:		(50)	(50)	(50)	(50)	(50)	(49)	(50)	(50)
Necrosis with inflammation		1	1	0	2	0	1	1	0
Kupffer cell pigmentation		0	0	0	3	1	0	0	0
Pale/clear cell focus(i)		3	2	0	0	0	0	0	0
Basophilic focus(i)		3	0	0	1	0	0	0	0
Focus(i) of lymphoid cell(s)		4	2	6	2	6	5	6	10
Extramedullary haemopoiesis		1	2	0	3	3	6	3	3
Hepatocyte vacuolation		1	5	1	3	2	4	1	1
Thrombus		0	0	0	0	0	1	0	0
Perivasculitis		0	0	0	1	0	0	0	0
Focus(i) of mineralisation		0	0	0	1	0	0	0	0
Centrilobular hepatocyte enlargement		1	0	1	1	0	2	1	1
Area(s) of degeneration/necrosis		1	2	1	5	3	2	3	3
Cyst(s)		0	0	0	0	0	0	1	1
Dilated sinusoids/angiectasis		0	0	2	0	0	1	0	0
Vascular amyloidosis		3	1	0	0	2	3	1	2
Increased cell turnover		2	1	1	4	1	3	2	1
Vascular endothelial pavementing by neutrophils		0	1	0	0	0	0	0	0
Inflammatory changes with/without mineralisation		6	5	9	11	10	9	6	8
Multinucleate hepatocytes		0	0	0	0	0	0	0	1
Contains secondary tumour		0	0	1	1	2	1	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
LUNGS:		(50)	(50)	(50)	(50)	(50)	(49)	(50)	(50)
No abnormality detected		18	17	15	15	15	18	17	12
ALVEOLAR/BRONCHIOLAR CARCINOMA(TA) [M]		10	7	8	9	3	2	1	5
ALVEOLAR/BRONCHIOLAR ADENOMA(TA) [B]		9	15	11	13	7	3	3	6
(Associated) ALVEOLAR/BRONCHIOLAR ADENOMA(TA) [B]		3	0	1	3	0	2	0	3
Infiltration by histiocytic cells		0	2	0	1	0	1	2	0
Infiltration by lymphoma cells		2	1	1	6	10	8	8	10
Alveolar epithelialisation		0	0	2	1	1	0	1	0
Focal adenomatosis		0	0	1	0	0	0	0	0
Interstitial/perivascular lymphoid cells		0	2	1	0	3	7	6	8
Interstitial pneumonitis		3	1	4	3	1	2	2	1
Increased alveolar macrophages		7	10	8	13	6	9	8	9
B.A.L.T. increase		2	1	3	2	2	0	2	0
Alveolitis		4	2	5	2	4	2	1	5
Perivasculitis		0	1	1	0	2	2	1	1
Alveolar oedema		0	0	0	0	0	0	0	2
Inflammatory changes		1	1	0	0	1	1	4	0
Alveolar haemorrhage(s)		0	1	1	1	2	4	1	3
Focal alveolar fibrosis		0	0	1	0	0	0	0	1
Focal pleural eosinophilic deposit(s)		0	0	0	0	0	0	1	0
Congestion		2	3	3	2	1	1	0	1
Bronchopneumonia		1	0	2	0	0	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
LUNGS:		(50)	(50)	(50)	(50)	(50)	(49)	(50)	(50)
Focal pleural fibrosis/thickening	0	0	1	0	0	1	2	1	
Solitary focus of vascular mural thickening	0	0	0	0	0	0	0	1	
Contains secondary tumour	1	0	1	1	0	0	2	1	
LYMPH NODE(S):		(8)	(12)	(9)	(20)	(18)	(16)	(15)	(13)
One or more has lymphoid hyperplasia	0	0	0	0	0	1	0	0	
One or more infiltrated by histiocytic cells	0	0	0	0	0	2	2	1	
One or more infiltrated by lymphoma cells	2	0	0	5	8	7	6	4	
One or more has vascular medial hypertrophy	0	0	0	0	1	0	0	0	
One or more has extramedullary haemopoiesis	0	0	1	0	1	0	0	0	
One or more has pigment deposits	0	0	0	0	2	0	0	0	
One or more reactive	0	0	0	0	1	2	1	0	
One or more has inflammatory cell infiltrate	0	0	1	1	0	0	0	1	
One or more has plasmacytosis	1	2	1	3	0	1	1	0	

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
LYMPH NODE(S):		(8)	(12)	(9)	(20)	(18)	(16)	(15)	(13)
One or more has multinucleate macrophages		0	0	0	1	0	0	0	0
One or more congested		0	0	0	0	0	2	0	0
One or more has amyloidosis		0	0	0	0	0	1	0	0
One or more contains secondary tumour		0	0	0	2	0	1	2	0
LYMPHORETICULAR/HAEMOPOIETIC TISSUE:		(4)	(4)	(1)	(8)	(14)	(15)	(12)	(14)
HISTIOCYTIC SARCOMA [M]		0	2	0	2	0	3	3	1
LYMPHOMA [M]		4	2	1	6	14	12	9	13
MAMMARY GLANDS:		(44)	(14)	(20)	(42)	(49)	(33)	(24)	(50)
No abnormality detected		42	14	20	42	42	28	17	42
CARCINOMA(TA) [M]		0	0	0	0	2	0	1	0
ADENOACANTHOMA MULTIPLE [B]		0	0	0	0	0	0	0	1
Alveolar development		0	0	0	0	2	2	0	5
Infiltration by lymphoma cells		0	0	0	0	3	3	3	0
Dilated/cystic duct(s)		1	0	0	0	1	0	1	0
Increased secretion present		0	0	0	0	1	0	0	3
Thrombosis		0	0	0	0	0	0	1	0
Inflammation		2	0	0	0	0	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
MAMMARY GLANDS:		(44)	(14)	(20)	(42)	(49)	(33)	(24)	(50)
Amyloidosis Site only examined		0 39	0 12	0 17	0 31	0 0	0 0	1 0	0 1
MEDIASTINUM:							(1)		
Infiltration by lymphoma cells							1		
MESENTERIC LYMPH NODE:		(46)	(20)	(18)	(47)	(48)	(31)	(22)	(49)
No abnormality detected		30	13	11	29	28	10	14	33
Infiltration by histiocytic cells		0	0	0	0	0	1	0	0
Infiltration by lymphoma cells		2	1	0	5	8	7	6	8
Lymphoid hyperplasia		0	0	0	0	0	1	0	0
Extramedullary haemopoiesis		0	1	2	2	1	0	0	0
Increased lymphocytolysis/lymphoid depletion		0	0	2	0	1	1	0	0
Pigmented macrophages		1	1	1	2	3	0	0	1
Reactive		0	0	0	1	1	0	0	0
Plasmacytosis		0	0	0	0	0	1	0	0
Oedema		0	0	0	0	0	2	0	1
Inflammatory changes		2	1	2	1	0	4	0	1
Cyst(s)		0	0	0	0	1	0	0	2

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
MESENTERIC LYMPH NODE:		(46)	(20)	(18)	(47)	(48)	(31)	(22)	(49)
Congestion		7	3	3	4	4	4	1	3
Amyloidosis		5	1	0	3	2	4	1	4
Contains secondary tumour		0	0	0	1	0	0	0	0
MESENTERY:				(2)	(1)	(3)		(1)	(1)
Infiltration by histiocytic cells				0	1	0		0	0
Infiltration by lymphoma cells				0	0	2		0	1
Perivasculitis				0	0	1		0	0
Chronic, active inflammation				1	0	0		0	0
Contains secondary tumour				1	0	0		1	0
NASAL CAVITY:					(1)	(1)			
Mucosal inflammation					0	1			
Haemorrhage(s)					1	0			
OESOPHAGUS:		(50)	(24)	(21)	(50)	(50)	(32)	(24)	(50)
No abnormality detected		50	24	21	50	50	32	24	48
Submucosal inflammation		0	0	0	0	0	0	0	2

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
OVARIES:						(50)	(33)	(24)	(50)
No abnormality detected						8	3	1	6
Unilateral GRANULOSA CELL TUMOUR(s) [M]						1	0	0	0
Unilateral metastasising LUTEAL CELL TUMOUR [M]						0	0	1	0
Unilateral tubulostromal ADENOMA [B]						0	0	0	2
Unilateral focus(i) of tubulostromal hyperplasia						0	0	1	3
(Associated) bilateral tubulostromal hyperplasia						0	0	0	1
Unilateral focus(i) of papillary hyperplasia						0	0	0	2
Bilateral Sertoliform tubular hyperplasia						1	0	0	0
Interstitial cell hyperplasia						2	1	0	3
Infiltration by histiocytic cells						0	0	1	1
Infiltration by lymphoma cells						7	6	5	2
Unilateral mineral deposit(s)						1	0	0	0
Pigment deposit(s)						4	1	1	0
Unilateral thrombus						1	1	0	1
Perivasculitis						3	3	1	3
Absence of recent corpus luteum						4	9	6	6
Cyst(s)						36	27	20	37
Unilateral angiectasis						0	0	0	1

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
<b>OVARIES:</b>									
Amyloidosis						2	3	0	3
Increased luteal tissue						0	1	3	1
Contains secondary tumour						0	0	1	0
<b>PANCREAS:</b>									
No abnormality detected	(50)	(25)	(20)	(49)	(50)	(33)	(24)	(50)	
ISLET ADENOMA [B]	41	17	13	39	30	17	15	30	
Islet hyperplasia	0	0	0	1	0	1	0	0	
Infiltration by histiocytic cells	0	0	0	0	0	0	0	0	
Infiltration by lymphoma cells	2	0	0	5	7	5	5	4	
Cystic duct(s)	0	1	1	0	1	0	0	0	
Localised replacement by fat	0	0	0	0	0	0	0	2	
Acinar atrophy	0	0	1	2	0	2	1	0	
Focus(i) of lymphoid cell(s)	5	2	2	2	6	1	1	5	
Acinar-cell vacuolation	0	0	1	0	2	2	0	2	
Perivasculitis	0	0	0	0	1	0	0	1	
Interstitial oedema	2	3	0	0	2	0	0	1	
Interstitial inflammation with/without necrosis	0	3	1	0	1	0	0	2	
Focal acinar hypertrophy	0	0	0	0	1	0	0	0	
Interstitial fibrosis	0	0	0	0	0	0	0	1	

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
PANCREAS:		(50)	(25)	(20)	(49)	(50)	(33)	(24)	(50)
Decreased islet tissue		0	1	0	0	0	0	0	0
Contains secondary tumour		0	0	0	0	0	0	0	1
PARATHYROIDS:		(44)	(19)	(19)	(45)	(43)	(28)	(21)	(41)
No abnormality detected		39	18	18	42	41	23	20	38
Infiltration by lymphoma cells		1	0	0	1	0	0	0	1
Lymphocytic infiltration		0	0	0	0	1	1	1	1
Unilateral mast-cell infiltration		0	0	0	0	0	1	0	0
Unilateral cyst(s)		0	0	0	0	0	1	0	0
Amyloidosis		4	1	1	2	1	2	0	1
PITUITARY:		(47)	(24)	(20)	(44)	(49)	(32)	(23)	(50)
No abnormality detected		43	23	19	41	41	29	20	43
Anterior lobe ADENOMA [B]		0	0	0	0	1	0	0	2
Intermediate lobe ADENOMA [B]		0	0	0	1	0	0	0	1
Cellular change		3	1	0	1	2	1	2	3
Infiltration by lymphoma cells		0	0	0	0	2	2	0	1
Focal mineral deposit(s)		0	0	0	1	0	0	0	0
Thrombus		0	0	0	0	1	0	0	0
Perivasculitis		0	0	0	0	1	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
PITUITARY:		(47)	(24)	(20)	(44)	(49)	(32)	(23)	(50)
Focal haemorrhage(s)		0	0	0	0	1	0	0	0
Anterior lobe cyst(s)		1	0	0	0	0	1	0	0
Congestion		0	0	1	0	0	0	1	1
PROSTATE:		(48)	(24)	(21)	(50)				
No abnormality detected		46	20	20	40*				
Metastasising SARCOMA [M]		0	0	1	0				
Contains haemangiosarcoma		0	0	0	1				
Hyperplasia		2	0	0	2				
Infiltration by histiocytic cells		0	0	0	1				
Infiltration by lymphoma cells		0	0	0	2				
Inflammation		0	4	0	3				
RECTUM:		(46)	(21)	(19)	(48)	(49)	(32)	(23)	(49)
No abnormality detected		45	21	19	48	49	32	23	49
Infiltration by lymphoma cells		1	0	0	0	0	0	0	0
SALIVARY GLAND:		(50)	(24)	(21)	(50)	(50)	(33)	(24)	(50)
No abnormality detected		32	19	19	31	27	17	17	27

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
SALIVARY GLAND:		(50)	(24)	(21)	(50)	(50)	(33)	(24)	(50)
SUBMAXILLARY: infiltration by lymphoma cells		1	0	0	3	8	2	3	3
SUBMAXILLARY: mucous hypertrophy		0	0	0	0	5	5	4	1
SUBMAXILLARY: medial hypertrophy		0	0	0	0	1	0	0	0
SUBMAXILLARY: acinar atrophy		3	0	0	1	1	0	0	0
SUBMAXILLARY: bacterial focus(i)		0	1	0	0	0	0	0	0
SUBMAXILLARY: lymphoid foci		9	3	2	9	9	6	2	16
SUBMAXILLARY: perivasculitis		0	0	0	1	1	0	0	1
SUBMAXILLARY: capsular fibrosis		0	0	0	0	0	0	1	0
SUBMAXILLARY: amyloidosis		0	0	0	0	0	0	1	0
SUBLINGUAL: infiltration by lymphoma cells		0	0	0	1	1	0	1	0
SUBLINGUAL: lymphoid foci		1	0	0	2	1	1	0	0
SUBLINGUAL: acinar-cell enlargement		0	0	0	1	0	0	0	0
SUBLINGUAL: amyloidosis		0	0	0	0	0	0	1	0
PAROTID: infiltration by lymphoma cells		0	0	0	1	3	2	2	0
PAROTID: acinar-cell vacuolation		1	1	0	2	0	0	0	1
PAROTID: acinar atrophy		0	0	0	0	0	1	0	0
PAROTID: lymphoid foci		1	0	0	2	2	1	1	3
PAROTID: inflammation		0	1	0	1	0	0	0	0
PAROTID: amyloidosis		5	1	0	2	2	3	1	2

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
SCIATIC NERVE:		(49)	(24)	(21)	(49)	(50)	(33)	(23)	(50)
No abnormality detected		46	23	21	49	50	33	21	48
Inflammatory changes		3	1	0	0	0	0	1	1
Lymphoma cells in surrounding tissue		0	0	0	0	0	0	1	1
SEMINAL VESICLES:		(24)	(10)	(9)	(24)				
No abnormality detected		0	4	1	0				
Unilateral mucosal hyperplasia		0	0	0	1				
Infiltration by histiocytic cells		0	0	0	1				
Infiltration by lymphoma cells		0	0	0	1				
Dilated with secretion		24	6	5	24				
Inflammation		2	0	1	1				
Haemorrhage(s)		0	0	1	0				
Cellular infiltrate in secretion		1	0	1	0				
Contains secondary tumour		0	0	1	0				
SKELETAL MUSCLE:		(50)	(24)	(21)	(50)	(49)	(33)	(24)	(50)
No abnormality detected		49	24	20	46	47	30	22	47
Infiltration by lymphoma cells		0	0	0	1	2	1	1	2
Mineral deposit(s)		0	0	0	0	0	0	1	0
Lymphocytic infiltration		1	0	0	1	0	1	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
SKELETAL MUSCLE:		(50)	(24)	(21)	(50)	(49)	(33)	(24)	(50)
Perivasculitis		0	0	0	1	0	0	0	1
Myositis		0	0	0	1	0	1	0	0
Areas of intramuscular haemorrhage(s)		0	0	1	0	0	0	0	0
SKIN/SUBCUTIS:		(50)	(24)	(21)	(50)	(50)	(33)	(24)	(50)
No abnormality detected		42	18	17	37	40	30	16	46
SQUAMOUS-CELL CARCINOMA [M]		1	0	0	0	0	0	1	1
SARCOMA(TA) of unknown cell origin [M]		1	0	1	0	1	0	1	1
PAPILLOMA(TA) [B]		0	0	0	1	1	0	0	0
LIPOMA [B]		0	0	0	1	0	0	0	0
Focus(i) of epidermal hyperplasia		0	0	0	0	0	0	0	1
Infiltration by histiocytic cells		0	0	0	1	0	0	0	0
Infiltration by lymphoma cells		0	0	0	1	5	1	2	0
Epidermal ulceration with		4	5	3	4	1	0	5	1
inflammation/necrosis									
Mast-cell accumulation		1	0	0	0	0	1	0	0
Subcutaneous oedema		0	1	0	0	0	0	0	0
Inflammation		1	0	0	2	1	0	0	0
Focus(i) of granulation tissue		0	0	0	1	0	0	0	0
Increased subcutaneous fat		0	0	0	0	0	1	0	0
Subcutaneous squamous epithelial cyst(s)		0	0	0	0	1	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
SKIN/SUBCUTIS:		(50)	(24)	(21)	(50)	(50)	(33)	(24)	(50)
Focal subcutaneous congestion		0	0	0	1	0	0	0	0
Subcutaneous sebaceous duct dilatation		0	0	0	0	0	0	0	1
SPINAL CORD:		(50)	(24)	(21)	(50)	(50)	(33)	(24)	(50)
No abnormality detected		46	22	21	50	49	32	24	46
LUMBAR : GANGLIONEUROMA [B]		1	0	0	0	0	0	0	0
THORACIC : meningeal hyperplasia		1	0	0	0	0	0	0	0
THORACIC : white matter mineralisation		0	0	0	0	0	0	0	1
Infiltration by lymphoma cells		0	0	0	0	1	1	0	0
Spinal canal dilatation		1	1	0	0	0	0	0	0
Axonal degeneration		0	1	0	0	0	0	0	2
Cyst(s)		1	0	0	0	0	0	0	1
SPLEEN:		(50)	(26)	(21)	(50)	(50)	(33)	(24)	(50)
No abnormality detected		32	8	12	27	21	7	6	28
SARCOMA of unknown cell origin [M]		0	0	0	0	0	0	1	0
Contains haemangiosarcoma		0	0	0	3	0	1	0	0
Infiltration by lymphoma cells		2	1	0	4	9	7	4	6
Lymphoid hyperplasia		0	0	0	1	0	0	0	0
Splenic contraction		2	3	2	1	1	1	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
SPLEEN:		(50)	(26)	(21)	(50)	(50)	(33)	(24)	(50)
White pulp depletion		0	1	0	1	0	0	1	0
Increased extramedullary haemopoiesis		9	8	6	11	13	15	11	10
Increased lymphocytolysis		1	3	1	2	0	1	0	1
Increased brown pigment deposit(s)		1	0	0	0	6	0	1	2
Perivasculitis		0	0	0	0	0	0	0	1
Large focus(i) of necrosis		0	0	0	0	1	1	0	0
Congestion in the red pulp		0	1	0	0	0	0	0	0
Amyloidosis		2	1	1	3	2	4	1	2
Abscess(es)		0	0	0	0	1	0	1	0
Increased cellularity of red pulp		1	0	0	0	0	0	0	0
Cell vacuolation in the red pulp		0	0	0	0	1	0	0	0
Chronic inflammatory thickening of the capsule		0	0	0	0	1	0	0	0
Contains secondary tumour		0	0	0	0	0	1	1	0
STERNUM:									
No abnormality detected		45	20	19	37	37	19	15	31
Bone marrow infiltration by lymphoma cells		1	0	0	2	3	4	4	2
Fibrous osteopathy		0	0	0	0	3	3	0	8
Pigment deposit(s)		0	0	0	0	0	0	0	1

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
STERNUM:		(50)	(25)	(21)	(50)	(50)	(32)	(24)	(49)
Focal bone marrow necrosis		0	0	0	0	1	0	0	0
Increased granulocytic haemopoiesis		1	3	2	4	3	1	2	3
Increased haemopoiesis		2	1	0	5	1	0	0	3
Decreased haemopoiesis		1	1	0	0	0	0	0	0
Lymphoid foci in marrow		0	0	0	2	0	0	0	0
Maldevelopment of one rib		0	0	0	1	0	0	0	0
Increased lymphoid cells in marrow		0	0	0	0	1	0	0	3
Increased medullary trabecular bone		1	0	0	0	2	5	3	1
STOMACH:		(50)	(24)	(21)	(49)	(50)	(33)	(24)	(49)
No abnormality detected		39	18	15	31	29	19	13	33
SQUAMOUS-CELL CARCINOMA [M]		0	0	0	1	0	0	0	0
Squamous epithelial hyperplasia		1	0	0	1	1	0	0	0
Focal glandular mucosal hyperplasia		3	0	0	6	2	1	3	5
Diffuse glandular mucosal hyperplasia		5	6	4	9	11	8	2	9
Infiltration by lymphoma cells		1	0	0	1	5	3	3	2
Dilated glands in muscle layer		0	0	0	2	0	0	0	0
Dilated mucosal glands		1	0	1	1	2	2	1	2
Submucosal lymphoid cell(s)		0	0	0	0	2	1	0	0
Perivasculitis		0	0	0	0	2	0	0	0
Submucosal oedema		0	0	0	0	0	1	0	1

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
STOMACH:		(50)	(24)	(21)	(49)	(50)	(33)	(24)	(49)
Inflammation		0	0	0	1	0	0	1	0
Submucosal haemopoiesis		0	0	0	0	0	1	0	0
Amyloidosis		0	0	0	0	0	0	0	1
Contains secondary tumour		0	0	1	0	0	0	1	0
SUBMANDIBULAR LYMPH NODE:		(5)	(2)		(5)	(8)	(1)	(1)	(4)
No abnormality detected		0	0		0	1	0	0	0
Infiltration by lymphoma cells		2	0		3	6	1	1	2
Lymphoid hyperplasia		0	0		0	1	0	0	0
Pigment deposit(s)		1	0		0	0	0	0	0
Reactive		0	0		1	0	0	0	0
Plasmacytosis		2	2		1	0	0	0	1
Cyst(s)		0	0		0	0	0	0	1
Congestion		0	0		0	0	1	0	1
TESTES:		(50)	(24)	(21)	(50)				
No abnormality detected		21	14	14	27				
INTERSTITIAL-CELL ADENOMA(TA) [B]		3	0	0	2				
Unilateral focal interstitial-cell hyperplasia		0	0	0	1				

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
TESTES:		(50)	(24)	(21)	(50)				
Diffuse interstitial cell hyperplasia		6	2	1	5				
Unilateral rete testis hyperplasia		1	0	0	1				
Infiltration by histiocytic cells		0	0	0	1				
Unilateral infiltration by lymphoma cells		0	0	0	1				
Tubular atrophy/mineralisation		18	5	5	11				
Depressed spermatogenesis		2	0	0	1				
Sperm accumulation		8	1	2	4				
Unilateral coagulative necrosis		0	0	0	2				
Unilateral rete testis inflammation		1	0	0	0				
Interstitial congestion		1	0	0	0				
Amyloidosis		1	0	1	0				
EPIDIDYMIS: infiltration by histiocytic cells		0	2	0	1				
EPIDIDYMIS: infiltration by lymphoma cells		1	0	0	1				
EPIDIDYMIS: spermatocoele(s)		2	0	1	1				
EPIDIDYMIS: inflammation		2	0	0	2				
EPIDIDYMIS: tubular dilatation		1	0	0	0				
EPIDIDYMIS: vascular endothelial pavementing by neutrophils		0	1	0	0				

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
THORAX:				(1)	(1)		(1)		
PLEURA: inflammation				0	0		1		
Infiltration by lymphoma cells				0	1		0		
Contains secondary tumour				1	0		0		
THYMUS:		(42)	(21)	(16)	(41)	(46)	(31)	(23)	(44)
No abnormality detected		32	16	11	25	27	15	13	17
Infiltration by lymphoma cells		3	0	0	5	10	10	6	10
Lymphoid hyperplasia		1	0	0	1	6	1	2	12
Epithelial hyperplasia		0	0	1	0	0	0	0	0
Increased lymphocytolysis		0	1	0	0	1	0	1	2
Focal foamy cell accumulation		0	0	0	0	0	0	0	1
Thrombus		0	0	0	0	1	0	1	0
Focus(i) of necrosis		0	0	0	0	0	0	0	1
Mast-cell infiltration		0	0	0	0	0	1	0	0
Chronic inflammatory cell infiltrate		0	0	0	0	0	1	0	0
Hassall's corpuscle enlargement		0	0	0	0	0	0	0	1
Cyst(s)		3	1	2	5	2	1	0	1
Vascular mural thickening		0	0	0	0	0	1	0	2
Congestion		0	1	0	0	0	0	2	2
Atrophy		3	2	1	5	1	0	0	0
Focus(i) of hyaline change		0	0	1	0	0	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
THYMUS:		(42)	(21)	(16)	(41)	(46)	(31)	(23)	(44)
Contains secondary tumour		0	0	1	0	0	1	0	1
Germinal centre development		0	0	0	0	0	0	0	1
THYROIDS:		(50)	(24)	(21)	(50)	(50)	(32)	(24)	(50)
No abnormality detected		24	17	13	28	30	26	15	28
Unilateral FOLLICULAR ADENOMA [B]		0	0	1	0	0	0	0	1
Unilateral focus(i) of follicular-cell hyperplasia		1	0	0	0	0	0	0	0
Unilateral focus(i) of c-cell hyperplasia		0	0	0	0	0	0	1	0
Infiltration by lymphoma cells		0	0	0	2	2	0	0	2
Dilated/cystic follicle(s)		20	6	5	19	12	4	6	17
Focus(i) of lymphoid cell(s)		2	0	0	0	4	0	2	1
Perivasculitis		1	0	0	0	1	0	0	0
Unilateral inflammatory cell infiltrate		0	0	1	1	0	0	0	0
Amyloidosis		6	1	1	1	2	2	1	1
TRACHEA:		(50)	(24)	(21)	(50)	(50)	(32)	(24)	(50)
No abnormality detected		50	24	21	50	50	32	23	50
Infiltration by lymphoma cells in lamina propria		0	0	0	0	0	1	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
URETER:					(1)				
Infiltration by lymphoma cells					1				
URINARY BLADDER:	(49)	(23)	(19)	(50)	(49)	(32)	(23)	(49)	
No abnormality detected	36	10	10	29	30	24	16	27	
Infiltration by histiocytic cells	0	0	0	1	0	0	1	0	
Infiltration by lymphoma cells	1	0	0	4	7	4	3	5	
Submucosal lymphoid focus(s)	6	3	3	6	12	2	3	16	
Perivasculitis	0	0	0	1	0	0	0	1	
Inflammation	4	6	4	3	0	0	0	0	
Focal transitional-cell hypertrophy	0	0	0	0	0	0	0	1	
Submucosal haemorrhage(s)	0	1	0	1	0	0	0	0	
Dilatation	4	8	6	6	0	2	0	1	
Large plug of seminal fluid in lumen	0	1	0	0	0	0	0	0	
UTERUS:					(50)	(33)	(24)	(50)	
No abnormality detected					7	1	5	6	
STROMAL SARCOMA [M]					2	0	1	2	
STROMAL TUMOUR [B]					0	0	0	1	
POLYP(S) [B]					1	3	1	2	
LEIOMYOMA(TA) [B]					0	1	0	2	

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
UTERUS:					(50)	(33)	(24)	(50)	
Cystic endometrial hyperplasia					32	21	12	33	
Endometrial hyperplasia					1	2	0	1	
Contains haemangiosarcoma					0	1	0	0	
Infiltration by histiocytic cells					0	3	3	0	
Infiltration by lymphoma cells					4	1	2	2	
Dilated/cystic gland(s)					7	6	3	5	
Mesothelial hyperplasia					1	0	0	0	
Extramedullary haemopoiesis					0	0	0	1	
Adenomyosis					2	0	1	2	
Thrombosis					1	3	0	4	
Perivasculitis					2	1	0	4	
Myometrial inflammation					0	0	1	0	
Mural haemorrhage(s)					1	0	0	0	
Fat necrosis					0	0	1	0	
Dilatation					0	3	2	2	
Angiectasis					2	1	0	0	
Pigmented macrophages in muscle layer					1	0	0	0	
VAGINA:								(1)	
POLYP [B]								1	

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 15 (continued)

FINDINGS	TREATMENT	INCIDENCE OF LESIONS (NUMERIC)							
		MALES				FEMALES			
		Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 2 100 mg/kg /day	Grp 3 300 mg/kg /day	Grp 4 1000 mg/kg /day
VASCULAR SYSTEM:		(5)	(6)	(3)	(9)	(6)	(7)	(2)	(9)
HAEMANGIOSARCOMA (M)		0	0	0	4	0	2	0	1
Perivasculitis		5	6	3	5	6	5	2	9
Vascular endothelial pavementing by neutrophils		0	1	0	0	0	0	0	0

Figures in brackets represent the number of animals from which this tissue was examined histologically.  
 Significance of differences in a pairwise (Fisher's) test: \* P<0.05, \*\* P<0.01, \*\*\* P<0.001

TABLE 16

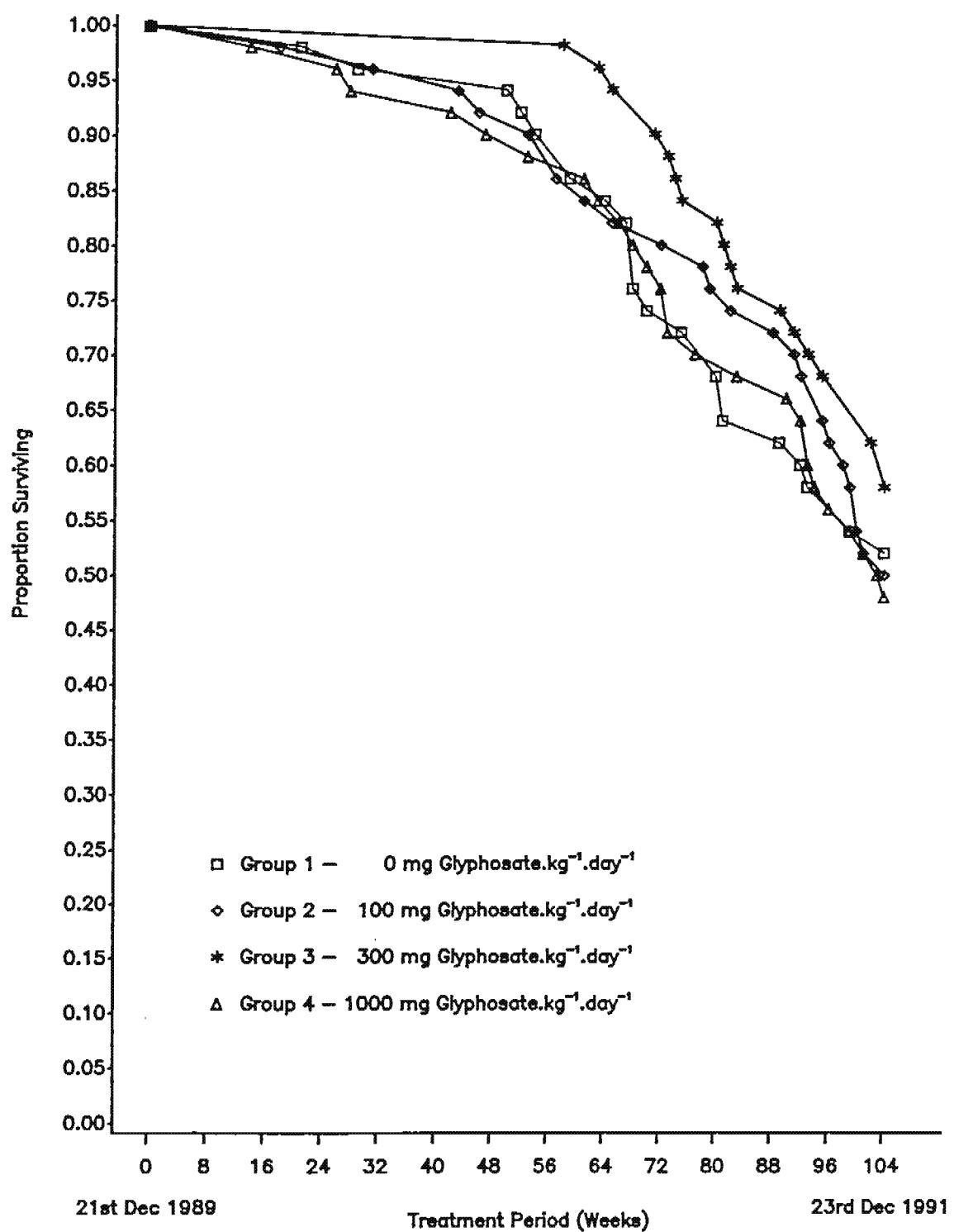
Glyphosate  
104 Week Dietary Carcinogenicity Study in Mice  
Overall Incidence of Tumours : Males and Females

TREATMENT	TUMOUR TABLE			
	MALES		FEMALES	
	Grp 1 0 mg/kg /day	Grp 4 1000 mg/kg /day	Grp 1 0 mg/kg /day	Grp 4 1000 mg/kg /day
NUMBER OF ANIMALS:	50	50	50	50
NO. OF ANIMALS WITH TUMOURS	35	37	30	30
NO. OF ANIMALS WITH SINGLE TUMOURS	24	21	24	19
NO. OF ANIMALS WITH MULTIPLE TUMOURS	11	16	6	11
NO. OF ANIMALS WITH BENIGN TUMOURS	21	23	12	15
NO. OF ANIMALS WITH MALIGNANT TUMOURS	23	25	23	22
NO. OF ANIMALS WITH METASTASISING TUMOURS	1	2	2	1
TOTAL NUMBER OF TUMOURS	49	60	36	43
TOTAL NUMBER OF BENIGN TUMOURS	24	31	12	19
TOTAL NUMBER OF MALIGNANT TUMOURS	25	29	24	24
TOTAL NUMBER OF METASTASISING TUMOURS	1	2	2	1
% ANIMALS WITH TUMOURS	70	74	60	60
% ANIMALS WITH SINGLE TUMOUR	48	42	48	38
% ANIMALS WITH MULTIPLE TUMOURS	22	32	12	22
% ANIMALS WITH BENIGN TUMOURS	42	46	24	30
% ANIMALS WITH MALIGNANT TUMOURS	46	50	46	44
% ANIMALS WITH METASTASISING TUMOURS	2	4	4	2

Animals with more than one tumour type are recorded as having multiple tumours.

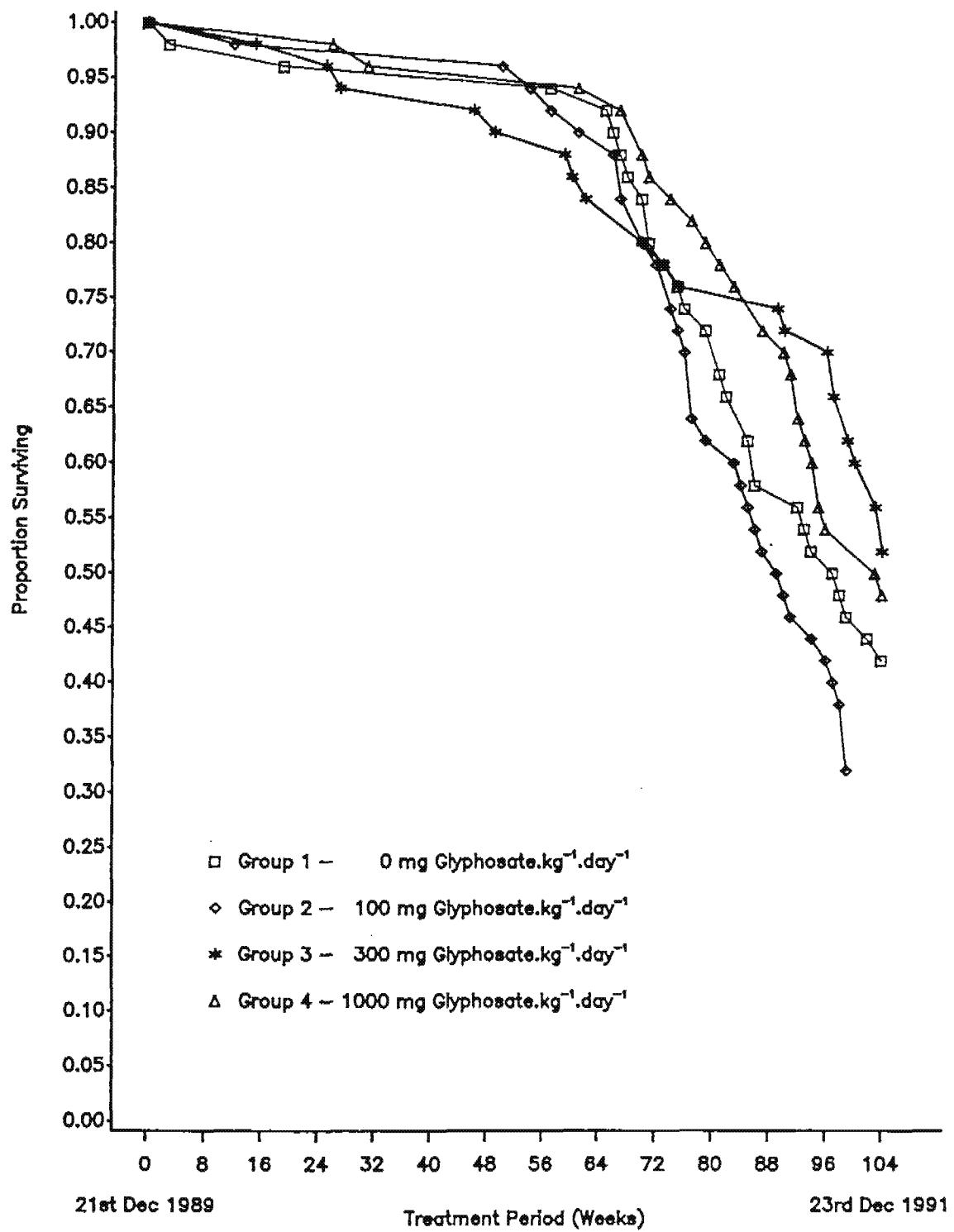
FIGURE 1

Glyphosate  
104 Week Dietary Carcinogenicity Study in Mice  
Kaplan-Meier Survival Curve : Males



**FIGURE 2**

Glyphosate  
104 Week Dietary Carcinogenicity Study in Mice  
Kaplan-Meier Survival Curve : Females



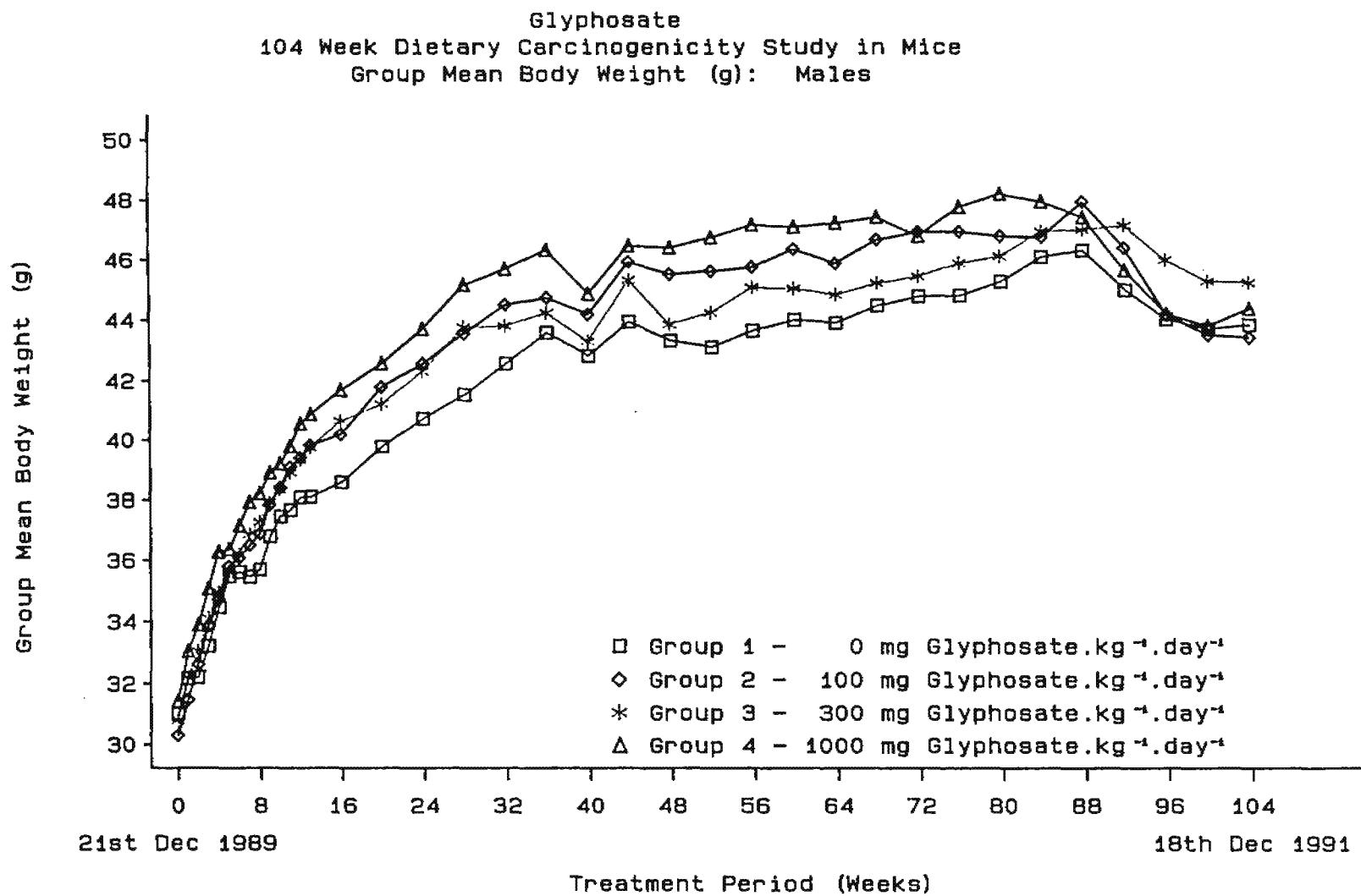
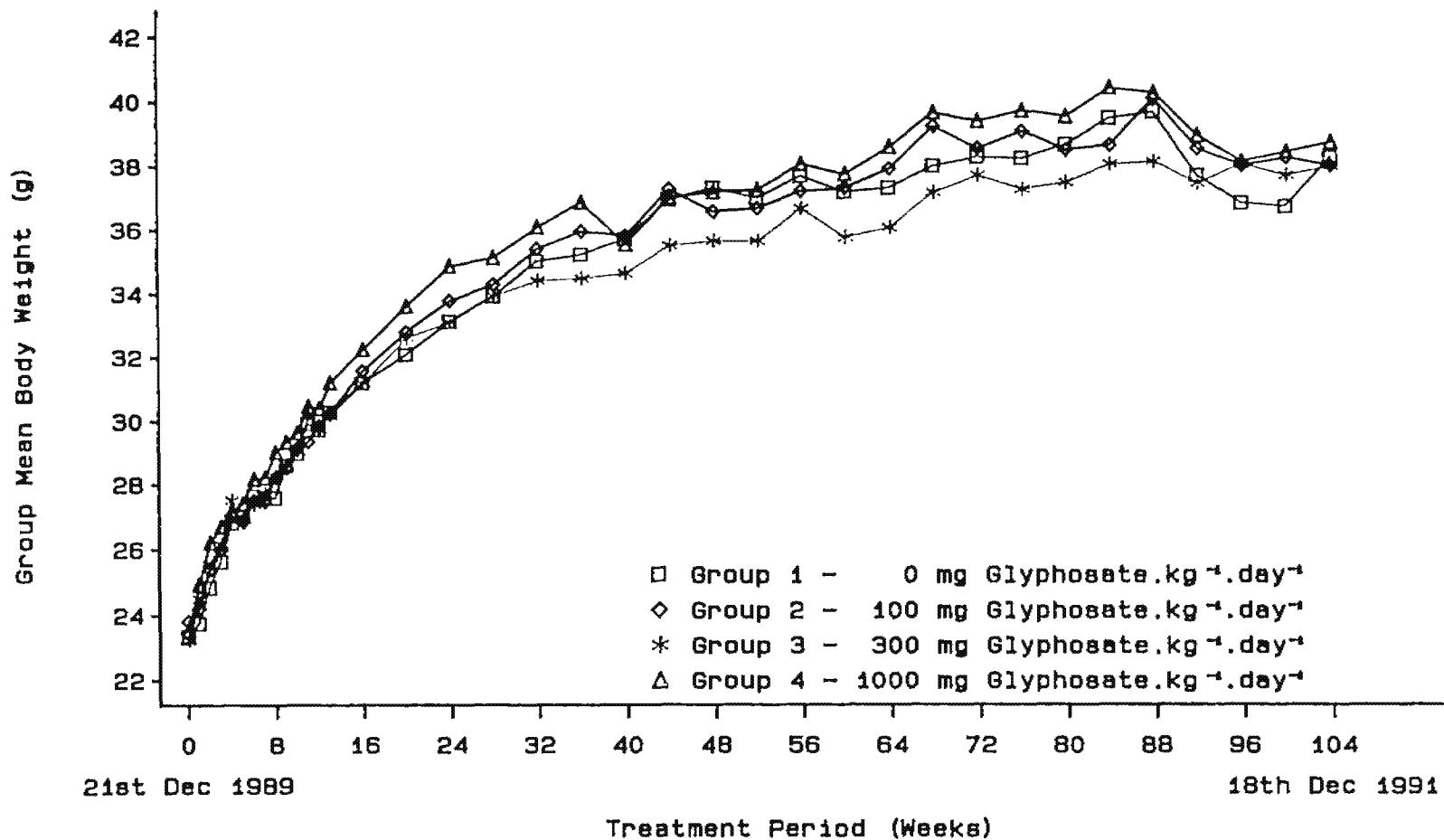
**FIGURE 3**

FIGURE 4

Glyphosate  
104 Week Dietary Carcinogenicity Study in Mice  
Group Mean Body Weight (g): Females



APPENDIX 1

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Batch Analytical Certificate**

ARTICLE IDENTIFICATION							
Article Name: Technical Glyphosate							
Manufacturer: Cheminova A/S							
Origin of Production: Commercial <input type="checkbox"/> Pilot Plant <input checked="" type="checkbox"/> Laboratory <input type="checkbox"/> Reg Dept Code: Batch No.: 206-JaK-25-1							
PHYSICAL PROPERTIES							
Technical Product <input checked="" type="checkbox"/>	Formulation of Technical Product <input type="checkbox"/>	Analytical Standard <input type="checkbox"/>	Liquid <input type="checkbox"/>	Solid <input checked="" type="checkbox"/>	Colour: White		
Recommended Storage Conditions:							
Ambient temperature in the dark <input checked="" type="checkbox"/>	Expiry Date: _____						
In refrigerator <input type="checkbox"/>	The article is stable at least <u>2</u> years from date of analysis when stored at recommended conditions						
In deep freezer <input type="checkbox"/>							
Additional Comments:							
ACTIVE INGREDIENT IDENTIFICATION							
Common Name/ISO Name: Glyphosate				CAS Name: Glycine, N-(Phosphonomethyl)			
CAS No.: 1071-83-6				Structural Formula:			
Empirical Formula: C <sub>3</sub> H <sub>8</sub> NO <sub>5</sub> P				$\begin{array}{c} \text{H} & \text{O} \\   &   \\ \text{HOOC-CH}_2-\text{N}-\text{CH}_2-\text{P}-\text{OH} \\   \\ \text{OH} \end{array}$			
Molecular Weight: 169.07							
Identified by means of:							
NMR <input checked="" type="checkbox"/>	IR <input checked="" type="checkbox"/>	UV <input type="checkbox"/>	MS <input type="checkbox"/>	Other Methods:			
ANALYTICAL DATA							
Purity: 97.5% w/w Date of Analysis: March 1990 Analytical Method: AM280							
Reference, Analytical Report: IRI Report No. B354							
GLP COMPLIANCE							
The identification and determination of purity were performed at Inveresk Research International Limited and conducted in accordance with the OECD Principles of Good Laboratory Practice as set forth by the United Kingdom Department of Health and as accepted by International Regulatory Authorities throughout the European Community, United States of America (FDA and EPA) and Japan (MHW, MAFF and MITI). All raw data, documentation, records, protocols, test articles, reference samples and report are retained in the GLP archives of Inveresk Research International Limited, Scotland.							
Date: <u>17 March 93</u>	Signature: <u>Yvonne M. Dando</u>						

1. Identification by NMR was carried out by Chemserve UMIST, Manchester. All raw data, documentation and records are retained in the GLP archives of Inveresk Research International Limited, Scotland.

APPENDIX 1 (continued)

## Batch Analytical Certificate

ARTICLE IDENTIFICATION					
Article Name: Technical Glyphosate Manufacturer: Cheminova A/S Origin of Production: Commercial <input type="checkbox"/> Pilot Plant <input checked="" type="checkbox"/> Laboratory <input type="checkbox"/> Reg Dept Codes: Batch No.: 206-JaK-25-1					
PHYSICAL PROPERTIES					
Technical Product <input checked="" type="checkbox"/> Formulation of Technical Product <input type="checkbox"/> Analytical Standard <input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Colour: White					
Recommended Storage Conditions: Ambient temperature in the dark <input checked="" type="checkbox"/> Expiry Date: _____ In refrigerator _____ The article is stable at least <u>2</u> years from date of analysis when stored at recommended conditions In deep freezer _____ Additional Comments:					
ACTIVE INGREDIENT IDENTIFICATION					
Common Name/ISO Name: Glyphosate CAS Name: Glycine, N-(Phosphonomethyl) CAS No.: 1071-83-6 Structural Formula: Empirical Formula: C <sub>3</sub> H <sub>8</sub> NO <sub>5</sub> P Molecular Weight: 169.07 Identified by means of: HOOC-CH <sub>2</sub> -N-CH <sub>2</sub> -P-OH Other Methods: OH NMR <input type="checkbox"/> IR <input type="checkbox"/> UV <input type="checkbox"/> MS <input type="checkbox"/>					
ANALYTICAL DATA					
Purity: 100.2% w/w Date of Analysis: August 1991 Analytical Method: AM280 Reference, Analytical Report: IRI Report No. 8354					
GLP COMPLIANCE					
The identification and determination of purity were performed at Inveresk Research International Limited <sup>1</sup> and conducted in accordance with the OECD Principles of Good Laboratory Practice as set forth by the United Kingdom Department of Health and as accepted by International Regulatory Authorities throughout the European Community, United States of America (FDA and EPA) and Japan (MHW, MAFF and MITI). All raw data, documentation, records, protocols, test articles, reference samples and report are retained in the GLP archives of Inveresk Research International Limited, Scotland. Date: <u>17 March 93</u> Signature: <u>Lynne M. Donaldson</u>					

1. Identification by NMR was carried out by Chemserve UMIST, Manchester. All raw data, documentation and records are retained in the GLP archives of Inveresk Research International Limited, Scotland.

APPENDIX 2

Glyphosate  
104 Week Dietary Carcinogenicity Study in Mice  
Analysis of Bedding

SPECIAL QUALITY CONTROL OF  
SMALL ANIMAL DIETS

CERTIFICATE OF ANALYSIS

Special Diets Services

PRODUCT: GOLD SHAVING/GRAINS/FLAKE

BATCH NO: 900312

MANUFACTURED WEEK COMMENCING: 03-DEC-90

Contaminant	Found Analysis	Limit of Detection
Lead	0.70	mg/kg
Copper	0.70	mg/kg
Total P.C.B	Non Detected	mcg/kg
Total D.D.T	13	mcg/kg
Dieldrin	1	mcg/kg
Salmonellae Species	Non Detected	per/g

Signed ..... R S F fluid .....  
Date ..... 11/19/91 .....

APPENDIX 3

Glyphosate  
104 Week Dietary Carcinogenicity Study in Mice  
Analysis of Diet

SPECIAL QUALITY CONTROL OF SMALL ANIMAL DIETS	APPROVED 22 MAR 1990	SDS Special Diets Services
CERTIFICATE OF ANALYSIS		

Nutrient	Found Analysis	Contaminant	Found Analysis	Limit of Detection
Moisture	9.2	%	Fluoride	13 mg/kg
Crude Fat	3.4	%	Nitrate as NaNO <sub>3</sub>	16 mg/kg
Crude Protein	15.5	%	Nitrite as NaNO <sub>2</sub>	2.8 mg/kg
Crude Fibre	2.4	%	Lead	0.60 mg/kg
Ash	4.4	%	Arsenic	Non Detected mg/kg
Calcium	0.67	%	Cadmium	0.10 mg/kg
Phosphorus	0.65	%	Mercury	Non Detected mg/kg
Sodium	0.24	%	Selenium	0.17 mg/kg
Chloride	0.34	%		
Potassium	0.66	%		
Magnesium	0.12	%	Total Aflatoxins	Non Detected mcg/kg
Iron	162	mg/kg		1 mcg/kg each of B1,B2,B1,B3
Copper	9	mg/kg		
Manganese	46	mg/kg		
Zinc	40	mg/kg	Total P.C.B	Non Detected mcg/kg
			Total D.D.T	Non Detected mcg/kg
			Dieldrin	Non Detected mcg/kg
			Lindane	Non Detected mcg/kg
			Heptachlor	Non Detected mcg/kg
			Malathion	Non Detected 20.0 mcg/kg
Vitamin A	3.4	iu/g	Total Viable Organisms x 1000	Non Detected per gram
Vitamin E	40	mg/kg		1000/g
Vitamin C		mg/kg	Mesophilic Spores x 100	Non Detected per gram
			Salmonellae Species	Non Detected per gram
			Presumptive E.coli	Non Detected per gram
			E.coli Type I	Non Detected per gram
			Fungal Units	75 per gram
			Antibiotic Activity	Non Detected

Signed ..... R. G. ...  
Dated ..... 7/1/91

APPENDIX 4

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Analysis of Water**

**Clayton Bostock Hill & Rigby**

CONSULTING SCIENTISTS, ENGINEERS AND ANALYSTS  
A Subsidiary of Clayton Environmental Consultants, Inc.  
BIRMINGHAM — LONDON — SOUTHAMPTON

288 Windsor Street  
Birmingham B7 4DW  
Tel: 021-359 5951  
Fax: 021-359 7606  
Telex: 337273

**BACTERIOLOGICAL EXAMINATION OF A SAMPLE OF WATER:**

Received: 16th March 1990 Our Ref: T05903 / JEC/ZB

From: Inveresk Research International Limited  
Inveresk Gate  
Musselburgh  
Scotland  
EH21 7UB  
For the attention of Dr. Waddell

Labelled: BLOCK C ROOM 9  
ELPHINSTONE RESEARCH CENTRE

Taken by: JOAN SUTHERLAND. Date: 15th March 1990 at 11.15  
Witness: C WASON.  
Signed: JOAN SUTHERLAND.

Number of colonies developing on yeast extract agar	1 day at 37°C	3 days at 20-22°C
	0 per ml	59 per ml
Most probable number:		
Presumptive coliform reaction	0 per 100 ml	
Escherichia coli	0 per 100 ml	

**COMMENT:**

A very satisfactory standard of bacterial purity.

Signed:

J.E. COOKE  
FOR: CLAYTON BOSTOCK HILL AND RIGBY LIMITED  
Date: 21st March 1990

Directors: A.C. Blair, BSc, PhD, MCChem, CChem, FRSC (Managing); J.D. Campbell, BSc, CEng, MCChem, MInst. Engrs., BSc, CChem, FRSC, MCChem; W.M. Thomas, BSc, PhD, MIVEM, MIVSoc, MAMVA, A.J. Heale, BSc, Eng; CEng, MCChem, ACGI, FCI, FIRMS; T.R. Waylett (USA), R.G. Under (USA - Chairman).  
Associates: C.W. Bryan, BSc, CEng, MCChem, MIVEM, MIVSoc; W.J. Lewis, BSc, MIVEM, MIVSoc.  
Consultants: C.J. Appleford, BSc, MIVEM, BEng, BMath, BSc, CChem, FRSC, CBiol, MIBiol, FIVEM, C.I. Orange, BSc, MCChem, CChem, FRSC, FIVEM; H.A. Mansfield, MSc, CBiol, FIVEM, G.R. Marwick, BSc, PhD, CChem, FRSC, FIVEM.  
A Marsh and McLennan Company Clayton Bostock Hill & Rigby Ltd Registered in England No. 1625376 Registered Office: 288 Windsor Street, Birmingham B7 4DW

APPENDIX 4 (continued)**Clayton Bostock Hill & Rigby**

CONSULTING SCIENTISTS, ENGINEERS AND ANALYSTS  
A Subsidiary of Clayton Environmental Consultants, Inc.

BIRMINGHAM LONDON MANCHESTER

288 Windsor Street  
Birmingham B7 4DW  
Tel: 021-359 5951  
Fax: 021-359 7606  
Telex: 337273

Organochlorine Pesticides (ug/l)

Gammahexachlorocyclohexane	LT 0.005
Heptachlor epoxide	LT 0.005
Heptachlor	LT 0.005
Aldrin	LT 0.005
Endrin	LT 0.010
Dieldrin	LT 0.005
pp DDT	LT 0.010
pp DDD	LT 0.005
pp DDE	LT 0.005
Chlordane Cle & trans	LT 0.010
Endosulfan A & B	LT 0.010

Signed:

Dr. R.J.C. Barron  
for CLAYTON BOSTOCK HILL AND RIGBY LIMITED  
30th May 1990

Analysis of a Sample of Water

Received:	16th March 1990	Your Ref:
From:	I.R.I. Limited, Inveresk Gate, Musselburgh, EH21 7UB.	Our Ref: RJCB/LJS T0591J
Labelled:	Block L, Bottle Wash, Elphinstone Research Centre.	Date: 15.3.90 at 10.45 am
Taken by:	John Sutherland	Witness: C. Wason
		Signed: John M. Sutherland

Organophosphorus Pesticides (ug/l)

Parathion	LT 0.05
Malathion	LT 0.05
Dimethoate	LT 0.05
Fenitrothion	LT 0.05
Pirimiphos-methyl	LT 0.05
Mavinphos	LT 0.05
Chlorfenvinphos	LT 0.05
Total Polychlorinated Biphenyls as Arochlor 1254 (ug/l)	LT 0.05

Polycyclic Aromatic Hydrocarbons (ug/l)

Fluoranthene	LT 0.005
Benzo (b) fluoranthene	LT 0.005
Benzo (k) fluoranthene	LT 0.005
Benzo (a) pyrene	LT 0.005
Benzo (ghi)perylene	LT 0.010
Indeno (1,2,3-cd) pyrene	LT 0.010
Triazine Herbicides	
Trietazine	LT 0.02
Atrazine	0.02
Simazine	LT 0.02

Printers: B.C. Print, 34, Park Meadow Avenue, BESG, Nottingham, NG2 1EW, Tel: 0115 9642000  
M.W. Thomas, 30, Park Meadow Avenue, BESG, NG2 1EW, Tel: 0115 9642000, ACE (0115) 9642000, FAX: 0115 9642000, Telex: 515422  
Designers: C.R. Thomas, 30, Park Meadow Avenue, BESG, NG2 1EW, Tel: 0115 9642000  
C.J. Barron, 30, Park Meadow Avenue, BESG, NG2 1EW, Tel: 0115 9642000  
Lithographers: C.J. Barron, 30, Park Meadow Avenue, BESG, NG2 1EW, Tel: 0115 9642000  
R.R. Marshall, 30, Park Meadow Avenue, NG2 1EW  
A.M. and M.J. Green (Composing) C.J. Barron (Proof Reading) Registered Office: 102519  
Registered Office: 102519

## APPENDIX 4 (continued)

## Clayton Bostock Hill &amp; Rigby

CONSULTING SCIENTISTS, ENGINEERS AND ANALYSTS  
A subsidiary of Clayton Environmental Consultants, Inc.  
BIRMINGHAM - LONDON - SOUTHAMPTON

288 Windsor Street  
Birmingham B7 4DW  
Tel: 021-359 5951  
Fax: 021-359 7608  
Telex: 33723

T05904

Sodium as Na, mg/l	= 6.25
Calcium as Ca, mg/l	= 14
Magnesium as Mg, mg/l	= 5.62
Potassium as K, mg/l	= 0.61
Sulphate as SO <sub>4</sub> , mg/l	= 17
Mercury as Hg, mg/l	= LT 0.0005
Selenium as Se, mg/l	= LT 0.005
Suspended Solids, mg/l (dried at 105°C)	= LT 5

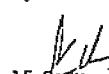
COMMENTS

This sample is clear and bright in appearance and contains a slight trace of colour. The reaction is on the alkaline side of neutrality and the water is soft in character with a low content of dissolved solids.

The water contains a minute trace of iron but is otherwise free from metals and is of a satisfactory standard of organic quality.

These results indicate from the aspect of the chemical analysis a wholesome water suitable for drinking and domestic purposes.

Signed



J.E. Cooke,  
for CLAYTON BOSTOCK HILL AND RIGBY LIMITED  
5th April, 1990

## Analysis of a Sample of Water

Received:	16th March 1990	Your Ref:	
From:	Inveresk Research Int. Limited, Inveresk Gate, Musselburgh, EH21 7UB.	Our Ref:	JEC/LJS T05905
Labelled:	Black L, Bottle Wash, Elphinstone Research Centre	Date:	15.3.90 @ 10.45am
Taken by:	Joan Sutherland	Witness:	C Wason
		Signed:	Joan Sutherland

Results (in milligrams per litre)  
Appearance: Clear and Bright

pH	8.7	Odour	NIL
Electrical Conductivity Reciprocal Megohms (Micro-Siemens) per cm at 20°C	127	Colour (Hazen)	5
Chlorine in Chloride	10	Turbidity (Formazin, A.P.H.A., units)	0.36
Hardness as CaCO <sub>3</sub>	Total 58	Nitrogen in Nitrate	0.7
	Carbonate 40	Nitrogen in Nitrite	LT 0.01
	Non-carbonate 18	Ammoniacal Nitrogen	0.01
Alkalinity as CaCO <sub>3</sub>	40	Albuminoid Nitrogen	
		Permanganate Value 4 hours at 27°C	0.3
Free Carbon Dioxide	2	Residual Chlorine	
Dissolved Solids dried at 180°C	85	Iron(Fe) 0.06	Zinc (Zn) LT 0.02
Copper(Cu) LT 0.02	Lead(Pb) LT 0.02	Manganese(Mn) LT 0.02	Aluminium(Al)
Cadmium (Cd) LT 0.001	Fluorine in Fluoride LT 0.1	Silica (SiO <sub>2</sub> ) 10.5	

LT = Less Than

Directors: A.J. Bostock, BSc PhD MChem, CChem, FRSC Managing: A.J. Cooke, BSc Engng, MChem, FInstM, M.A. Smith, BSc CChem, FRSC, MCIM  
W.R. Pinnock, BSc and Technical Services: Consultant: A.J. Bostock, BSc Engng, MChem, FInstM, T.S. Walker, BSc, MChem, FInstM, R. B. Waller, BSc, MChem  
Associate: E.W. Brown, BSc (Eng. MSc), MChem, FRSC, MInstM, M.R. Sander, BSc, MChem, FRSC  
Consultant: G.J. Arthington, BSc, MInstM, MChem, FRSC, MInstR, MInstM, MInstP, MInstV, MInstF, MInstG, MInstE, MInstC, MInstA, MInstB, MInstD, MInstF, MInstH, MInstJ, MInstL, MInstN, MInstP, MInstR, MInstS, MInstT, MInstU, MInstV, MInstW, MInstX, MInstY, MInstZ, MInstAA, MInstAB, MInstAC, MInstAD, MInstAE, MInstAF, MInstAG, MInstAH, MInstAI, MInstAJ, MInstAK, MInstAL, MInstAM, MInstAN, MInstAO, MInstAP, MInstAQ, MInstAR, MInstAS, MInstAT, MInstAU, MInstAV, MInstAW, MInstAX, MInstAY, MInstAZ, MInstBA, MInstCA, MInstDA, MInstEA, MInstFA, MInstGA, MInstIA, MInstOA, MInstPA, MInstQA, MInstRA, MInstSA, MInstTA, MInstUA, MInstVA, MInstWA, MInstXA, MInstYA, MInstZA  
Associate: G.J. Arthington, BSc, MInstM, MChem, FRSC  
A Member of the Bostock Group of Companies: Clayton Bostock Hill & Rigby Ltd  
Registered Office: 288 Windsor Street, Birmingham B7 4DW

APPENDIX 5

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Analyses of Formulated Diets**

Date of Preparation	Dose Group/Sex	Theoretical Concentration (p.p.m.)	Found Concentration (p.p.m.)	Mean Found Concentration (p.p.m.)	% Difference From Theoretical Concentration	Coefficient of Variation (%)
Week 1 (21 December 1989)	1♂♀	0	0,0,0	0	0	0
	2♂	388	345,377,383	368	-5.2	5.6
	2♀	351	319,330,317	322	-8.3	2.2
	3♂	1196	1137,1092,1105	1111	-7.1	2.1
	3♀	1020	1000,953,980	978	-4.1	2.4
	4♂	4063	3642,3833,3605	3693	-9.1	3.3
	4♀	3486	3370,3342,3311	3341	-4.2	0.9
Week 4 (11 January 1990)	1♂♀	0	0,0,0	0	0	0
	2♂	454	432,429,423	428	-5.7	1.1
	2♀	342	346,348,350	348	+1.8	0.6
	3♂	1327	1284,1247,1237	1256	-5.4	2.0
	3♀	1032	971,976,968	972	-5.8	0.4
	4♂	4636	4600,4508,4629	4579	-1.2	1.4
	4♀	3494	3401,3405,3509	3438	-1.6	1.8
Week 8 (8 February 1990)	1♂♀	0	0,0,0	0	0	0
	2♂	510	463,476,480	473	-7.3	1.9
	2♀	425	390,433,427	417	-1.9	5.6
	3♂	1572	1570,1520,1643	1578	+0.4	3.9
	3♀	1329	1392,1266,1391	1350	+1.6	5.4
	4♂	5408	5293,4927,4602	4941	-8.6	7.0
	4♀	4492	4330,4786,4457	4524	+0.7	5.2

APPENDIX 5 (continued)

## Analyses of Formulated Diets

Date of Preparation	Dose Group/Sex	Theoretical Concentration (p.p.m.)	Found Concentration (p.p.m.)	Mean Found Concentration (p.p.m.)	% Difference From Theoretical Concentration	Coefficient of Variation (%)
Week 12 (8 March 1990)	1♂	0	0,0,0	0	0	0
	2♂	590	570,602,581	584	-1.0	2.8
	2♀	452	451,444,424	440	-2.7	3.2
	3♂	1721	1514,1624,1562	1567	-9.0	3.5
	3♀	1439	1359,1322,1334	1338	-7.0	1.4
	4♂	5897	5910,5793,5905	5869	-0.5	1.1
	4♀	4529	4484,4586,4589	4553	+0.5	1.3
Week 15 (29 March 1990)	1♂	0	0,0,0	0	0	0
	2♂	625	669,640,596	635	+1.6	5.8
	2♀	486	482,520,536	513	+5.6	5.4
	3♂	1883	1983,2011,1916	1970	+4.6	2.5
	3♀	1463	1465,1467,1518	1483	+1.4	2.0
	4♂	6369	6433,6427,6517	6459	+1.4	0.8
	4♀	4843	4788,4758,4758	4768	-1.5	0.4
Week 23 (24 May 1990)	1♂	0	0,0,0	0	0	0
	2♂	734	700,651,719	690	-6.0	5.1
	2♀	515	511,496,495	501	-2.7	1.8
	3♂	2147	2116,2393,2277	2262	+5.4	6.1
	3♀	1561	1565,1561,1636	1587	+1.7	2.7
	4♂	7431	6964,7099,6858	6974	-6.1	1.7
	4♀	4635	4428,4435,4175	4346	-6.2	3.4

APPENDIX 5. (continued)

## Analyses of Formulated Diets

Date of Preparation	Dose Group/Sex	Theoretical Concentration (p.p.m.)	Found Concentration (p.p.m.)	Mean Found Concentration (p.p.m.)	% Difference From Theoretical Concentration	Coefficient of Variation (%)
Week 30 (12 July 1990)	1♂	0	0,0,0	0	0	0
	2♂	759	745,730,736	737	-2.9	1.0
	2♀	629	576,604,583	588	-6.5	2.5
	3♂	2263	2174,2170,2193	2179	-3.7	0.6
	3♀	1838	1772,1851,1750	1791	-2.6	3.0
	4♂	7633	6874,7384,7337	7198	-5.7	3.9
	4♀	5883	5445,5734,5607	5595	-4.9	2.6
Week 38 (6 September 1990)	1♂	0	0,0,0	0	0	0
	2♂	833	802,823,806	810	-2.8	1.4
	2♀	708	677,703,697	692	-2.3	2.0
	3♂	2513	2417,2399,2396	2404	-4.3	0.5
	3♀	2118	2026,2195,1995	2072	-2.2	5.2
	4♂	8473	7924,8704,8576	8401	-0.8	5.0
	4♀	7440	7276,7206,7273	7252	-2.5	0.5
Week 46 (1 November 1990)	1♂	0	0,0,0	0	0	0
	2♂	798	747,791,773	770	-3.5	2.9
	2♀	616	599,581,575	585	-5.0	2.1
	3♂	2410	2375,2342,2432	2383	-1.1	1.9
	3♀	1826	1840,1841,1937	1873	+2.6	3.0
	4♂	7933	7893,7490,7744	7709	-2.8	2.6
	4♀	5906	6201,6231,6023	6152	+4.2	1.8

APPENDIX 5 (continued)

## Analyses of Formulated Diets

Date of Preparation	Dose Group/Sex	Theoretical Concentration (p.p.m.)	Found Concentration (p.p.m.)	Mean Found Concentration (p.p.m.)	% Difference From Theoretical Concentration	Coefficient of Variation (%)
Week 54 (27 December 1990)	1♂♀	0	0,0,0	0	0	0
	2♂	725	659,671,642	657	-9.4	2.2
	2♀	565	569,557,562	563	-0.4	1.1
	3♂	2148	2124,2217,2011	2117	-1.4	4.9
	3♀	1643	1550,1616,1562	1576	-4.1	2.2
	4♂	7344	7250,7405,7396	7350	+0.1	1.2
	4♀	5905	5575,5856,5543	5658	-4.2	3.0
Week 62 (21 February 1991)	1♂♀	0	0,0,0	0	0	0
	2♂	722	710,669,679	686	-5.0	3.1
	2♀ <sup>a</sup>	594	1982,2192,2029	2068	+248	5.3
	3♂	2143	2078,2107,2170	2118	-1.2	2.2
	3♀	1581	1511,1565,1486	1521	-3.8	2.7
	4♂	7246	7126,6741,7060	6976	-3.7	3.0
	4♀	5420	5129,5242,5293	5221	-3.7	1.6
Week 64 (7 March 1991)	2♀	594	478,533,568	526	-11.4	8.6
Week 76 (30 May 1991)	1♂♀	0	0,0,0	0	0	0
	2♂	738	717,714,758	730	-1.1	3.4
	2♀	572	611,558,522	564	-1.4	7.9
	3♂	2211	2224,2241,2216	2227	+0.7	0.6
	3♀	1641	1621,1710,1585	1639	-0.1	3.9
	4♂	7313	7422,7554,7545	7507	+2.7	1.0
	4♀	6046	5819,6232,6218	6090	+0.7	3.9

a = Suspect that Group 3♂ sampled instead of Group 2♀ in error, next formulation analysed

APPENDIX 5 (continued)

## Analyses of Formulated Diets

Date of Preparation	Dose Group/Sex	Theoretical Concentration (p.p.m.)	Found Concentration (p.p.m.)	Mean Found Concentration (p.p.m.)	% Difference From Theoretical Concentration	Coefficient of Variation (%)
Week 83 (24 July 1991)	1♂	0	0,0,0	0	0	0
	2♂	758	753,705,742	733	-3.3	3.4
	2♀	614	587,607,623	606	-1.3	3.0
	3♂	2240	2115,2176,2068	2120	-5.4	2.6
	3♀	1819	1833,1909,1783	1842	+1.3	3.4
	4♂	7594	7008,8041,7013	7354	-3.2	8.1
	4♀	6387	6132,6112,6145	6130	-4.0	0.3
Week 93 (2 October 1991)	1♂	0	0,0,0	0	0	0
	2♂	744	706,727,†	717	-3.6	2.1
	2♀	600	592,609,623	608	+1.3	2.6
	3♂	2243	2074,2100,1973	2049	-8.6	3.3
	3♀	1850	1787,1597,1609	1664	-10.1 <sup>b</sup>	6.4
	4♂	7095	6381,6473,7353	6736	-5.1	8.0
	4♀	6111	6037,5435,5404	5625	-8.0	6.3

† = Sample preparation error therefore sample not analysed

b = Deviation from theoretical concentration considered to be slight due to higher than average variation in standards and samples therefore next formulation not analysed

APPENDIX 6

## Glyphosate

104 Week Dietary Carcinogenicity Study in Mice  
Methods, Abbreviations and Units Used in Laboratory InvestigationsHaematology

<u>Parameters</u>	<u>Method</u>	<u>Units</u>
Differential White Cell Count:		
Neutrophil: (Neut)		
Lymphocyte: (Lymp)	Visual appraisal of stained film. (May-Grunwald and Giemsa Stain)	%
Monocyte: (Mono)		
Eosinophil: (Eos)		

APPENDIX 7**Glyphosate**

104 Week Dietary Carcinogenicity Study in Mice  
Individual Body Weights (g): Males and Females

Group 1σ: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																		
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	20	24	28
1	26	29	30	32	33	34	35	36	36	37	37	37	38	38	39	40	40	42	42	43	
2	28	30	31	32	31	32	33	32	34	34	35	36	36	37	38	38	38	40	40	40	42
3	26	28	29	29	29	30	31	33	34	32	33	33	34	34	34	35	35	36	36	37	
4	27	29	30	31	31	31	32	34	33	35	35	36	37	37	38	39	40	40	42	43	
5	26	28	30	31	30	31	33	32	33	33	33	33	34	34	34	35	33	34	34	37	
6	27	31	33	33	34	35	36	37	38	38	37	38	39	38	38	38	40	40	41	40	
7	28	31	31	31	31	33	33	35	34	33	32	34	34	34	35	35	35	36	38	38	
8	27	32	34	35	35	35	35	37	36	36	35	35	36	36	37	37	36	38	36	38	
9	26	28	30	30	32	32	33	35	36	36	35	37	38	38	40	39	38	41	43	43	
10	27	29	30	32	31	31	32	34	33	33	32	34	33	33	35	33	33	27	-	-	
11	23	25	27	28	29	30	31	32	33	32	32	33	34	34	36	36	37	39	38	39	
12	27	29	31	33	32	33	34	35	34	36	34	37	37	37	37	38	37	38	38	41	
13	28	31	33	33	33	34	34	35	35	35	35	37	36	37	36	38	39	40	40	40	
14	30	31	32	32	33	34	35	37	37	36	37	38	38	39	38	38	39	41	41	43	
15	29	31	33	34	35	36	38	39	38	38	38	40	41	42	42	41	43	45	45	47	
16	27	31	32	33	34	36	38	39	39	38	39	42	42	44	45	45	45	48	50	51	
17	26	30	31	33	33	35	37	38	37	37	38	40	40	40	41	41	43	44	46	46	
18	24	27	29	29	29	30	32	31	32	32	32	34	35	35	36	34	36	36	37	38	
19	27	28	29	31	30	31	32	33	33	32	32	34	35	35	36	36	36	40	41	42	
20	29	32	32	33	33	33	34	35	35	36	37	39	40	40	41	40	40	41	42	40	
21	26	27	29	29	29	31	31	32	32	31	31	33	34	35	35	34	36	37	39	40	
22	28	30	32	33	33	34	35	37	36	34	35	36	38	37	38	37	37	37	39	39	
23	25	26	29	31	32	34	35	35	34	34	35	37	37	39	40	40	39	40	42	44	
24	27	30	33	34	34	35	36	37	37	36	36	37	39	39	39	39	40	41	42	43	
25	26	29	31	33	33	35	35	36	36	35	35	36	37	37	37	37	38	37	39	39	

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g):Males and Females

Group 1st: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
1	45	47	46	48	48	49	50	51	52	53	54	53	54	55	56	56	54	52	54
2	43	46	44	49	47	46	46	46	46	44	43	37	-	-	-	-	-	-	-
3	38	39	39	41	40	41	41	42	42	41	41	41	40	39	40	39	39	40	-
4	45	47	46	47	48	47	49	50	49	50	50	51	51	52	55	-	-	-	-
5	37	38	38	39	40	39	39	-	-	-	-	-	-	-	-	-	-	-	-
6	43	46	42	45	42	41	41	42	42	40	39	-	-	-	-	-	-	-	-
7	40	41	41	43	42	42	44	45	44	45	46	45	46	46	48	47	47	48	47
8	39	40	39	40	40	40	39	39	41	-	-	-	-	-	-	-	-	-	-
9	43	44	41	40	39	39	35	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	40	43	43	44	44	44	45	45	45	45	46	45	44	43	42	41	40	38	38
12	40	42	41	43	42	41	42	43	42	43	43	43	42	43	44	42	42	-	-
13	40	42	40	42	41	41	41	42	42	42	42	43	42	43	40	-	-	-	-
14	44	45	44	45	45	47	48	48	48	47	47	47	47	47	47	47	46	45	45
15	47	49	48	49	49	50	52	52	51	50	51	51	50	49	50	49	48	47	45
16	53	54	52	53	53	53	53	53	55	56	55	55	56	58	56	54	54	51	53
17	48	50	50	51	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	38	39	39	39	39	39	41	40	39	39	40	40	40	40	40	39	38	37	37
19	44	44	43	45	45	47	47	47	48	49	49	48	50	50	50	49	48	47	48
20	44	44	44	44	43	42	41	41	39	-	-	-	-	-	-	-	-	-	-
21	43	44	43	43	35	36	38	37	37	40	42	46	43	41	41	39	36	33	33
22	40	40	40	41	40	41	42	42	42	43	43	42	41	42	43	42	42	41	43
23	45	45	45	46	46	47	48	48	47	48	50	49	49	48	51	50	48	48	48
24	45	44	43	47	45	44	-	-	-	-	-	-	-	-	-	-	-	-	-
25	38	40	39	41	40	40	40	40	41	42	41	41	41	42	42	41	40	40	41

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 1 $\sigma$ : 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24
26	30	32	35	35	34	36	37	38	39	38	39	41	41	42	42	43	45	44	47
27	25	28	30	32	33	34	35	36	37	35	35	38	38	39	39	40	42	42	42
28	27	30	32	32	35	36	38	40	39	41	42	45	46	48	49	49	50	54	56
29	29	31	34	35	35	36	39	40	40	40	39	41	40	40	40	41	42	43	35
30	26	29	31	32	31	33	35	36	37	35	34	35	36	37	36	36	38	39	41
31	29	29	30	31	32	33	34	36	35	34	34	35	35	36	35	35	37	36	39
32	27	29	31	32	32	33	34	35	36	34	34	36	36	37	36	36	35	36	37
33	28	31	33	34	33	35	35	37	36	35	34	36	36	36	37	36	36	37	37
34	28	30	32	34	34	34	36	38	38	39	38	39	40	40	40	41	43	42	44
35	28	28	30	31	30	31	33	33	34	34	34	35	35	35	34	34	39	40	42
36	24	27	29	30	30	31	33	35	35	33	34	34	33	34	34	34	35	36	36
37	28	30	32	34	35	35	36	38	37	38	38	39	40	39	39	38	38	42	44
38	29	31	34	35	35	35	37	39	39	39	40	40	41	41	42	41	43	44	47
39	27	28	30	32	31	32	34	35	36	35	35	35	35	35	36	36	35	37	38
40	27	29	32	32	34	35	35	38	38	38	38	38	41	40	41	41	43	42	45
41	26	29	30	32	32	32	33	34	34	36	35	35	37	36	37	36	37	38	39
42	26	28	30	32	31	32	34	33	33	34	36	37	36	36	35	35	36	37	37
43	29	31	33	36	36	37	38	40	40	40	42	44	45	44	45	46	44	45	46
44	26	27	29	30	29	30	33	31	33	32	33	34	36	35	34	36	36	38	39
45	27	28	28	30	29	31	32	31	32	34	35	35	35	36	35	36	35	36	40
46	24	26	27	28	28	29	31	30	31	31	32	31	33	33	33	33	35	35	36
47	27	30	32	34	33	34	37	37	37	38	39	40	39	39	40	41	42	44	44
48	26	28	30	31	31	32	34	34	34	33	35	35	36	35	36	36	35	36	37
49	30	33	35	37	36	37	38	39	40	41	42	42	42	44	44	44	45	46	48
50	28	31	31	33	33	33	33	35	35	37	38	39	39	40	41	41	42	43	45

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 1σ: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
26	45	44	44	45	46	46	48	47	47	44	46	47	47	48	49	48	48	49	47
27	45	44	43	44	43	42	43	43	44	-	-	-	-	-	-	-	-	-	-
28	58	56	56	56	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	42	43	43	43	42	42	44	43	43	44	44	45	45	46	46	46	45	45	46
31	37	37	37	36	39	38	38	39	-	-	-	-	-	-	-	-	-	-	-
32	38	40	38	39	39	39	39	38	40	39	39	39	40	41	41	40	40	40	38
33	39	39	39	40	40	40	41	39	40	40	41	41	41	42	42	42	41	42	42
34	45	46	45	46	45	48	48	48	47	49	48	47	47	47	48	46	44	44	43
35	44	45	45	46	45	46	44	44	42	40	-	-	-	-	-	-	-	-	-
36	37	37	37	39	38	38	40	38	38	37	37	38	38	-	-	-	-	-	-
37	46	47	48	46	47	47	48	48	46	49	47	48	49	50	50	48	47	45	46
38	48	49	48	49	49	48	49	49	49	49	49	49	49	49	47	45	44	44	44
39	38	39	38	38	38	37	39	38	36	36	35	34	31	-	-	-	-	-	-
40	44	45	45	45	46	44	46	46	46	-	-	-	-	-	-	-	-	-	-
41	39	41	40	40	41	41	41	41	41	42	43	43	44	44	44	44	42	42	42
42	37	39	39	40	39	39	40	41	38	42	43	42	44	44	44	43	43	43	43
43	45	47	46	51	50	49	51	52	51	55	54	53	51	48	46	41	40	-	-
44	40	41	41	44	43	44	45	46	47	46	49	50	50	50	53	52	50	50	48
45	39	40	37	37	38	37	36	36	37	37	37	37	37	37	37	35	36	36	37
46	35	37	36	37	38	37	37	38	38	37	37	36	-	-	-	-	-	-	-
47	46	48	45	45	45	46	46	46	45	46	45	45	46	45	45	43	-	-	-
48	40	39	39	43	41	42	44	43	42	43	42	43	45	45	45	44	40	39	39
49	48	50	49	50	50	51	50	51	49	51	52	52	52	53	52	50	48	47	48
50	46	46	47	45	45	45	45	45	45	46	47	47	47	48	48	46	46	46	44

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 2d: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
51	29	30	32	32	34	36	36	38	39	39	40	42	43	45	45	46	47	50	52	53
52	28	30	33	35	36	38	40	42	41	41	42	43	44	44	45	46	47	48	50	52
53	29	31	32	33	34	34	34	36	35	36	36	37	38	38	39	39	41	42	41	43
54	29	31	34	36	36	37	37	39	40	41	41	42	42	42	43	44	45	47	46	47
55	29	30	31	33	35	37	38	38	39	40	39	41	39	40	40	40	40	40	40	41
56	26	27	28	28	29	30	31	32	33	33	35	36	37	37	36	37	37	39	39	38
57	25	25	27	29	30	32	32	33	34	33	34	35	34	35	35	35	36	37	36	33
58	25	29	30	32	32	33	33	34	34	35	35	35	34	35	35	37	35	36	36	37
59	27	26	26	28	31	33	33	35	36	36	37	38	37	40	41	41	41	43	44	45
60	28	31	32	33	34	35	36	38	37	38	38	39	40	41	41	41	44	46	47	47
61	26	28	31	31	33	35	34	35	35	36	36	36	37	37	36	36	36	36	40	38
62	28	30	32	32	32	34	34	36	36	36	37	37	37	38	39	38	39	38	39	42
63	28	30	32	33	34	36	36	38	39	40	41	43	43	45	44	45	47	48	50	49
64	28	30	32	33	34	36	36	37	40	39	40	42	43	44	44	45	46	49	50	52
65	27	29	31	32	34	36	36	37	37	39	38	39	40	41	40	41	42	42	42	43
66	25	26	28	29	30	31	31	33	33	33	34	35	36	36	37	37	38	38	37	38
67	26	27	31	31	32	34	35	36	37	38	39	40	40	42	41	42	43	44	47	48
68	28	29	30	32	32	33	35	36	36	36	36	37	37	38	39	41	42	45	46	48
69	26	29	31	33	33	34	36	36	37	37	37	38	40	40	40	40	42	44	43	
70	29	30	32	33	35	35	36	37	37	37	38	38	38	39	39	39	40	41	42	43
71	28	30	31	32	33	36	37	38	38	38	39	40	41	42	42	42	44	47	48	50
72	28	31	32	34	34	35	36	37	36	36	37	39	39	40	40	39	40	42	43	45
73	26	28	29	29	30	31	31	32	33	34	35	35	35	35	35	33	27	-	-	-
74	26	29	30	32	33	34	35	37	37	38	39	40	41	41	41	42	42	43	46	47
75	25	29	30	32	31	33	33	33	34	35	35	35	36	36	37	37	37	38	39	41

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 2♂: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																	
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100
51	55	55	55	57	56	58	59	60	60	59	60	61	60	60	58	52	47	44
52	55	55	54	54	54	54	55	54	54	53	52	53	49	-	-	-	-	-
53	44	44	45	45	44	43	43	40	39	42	40	38	-	-	-	-	-	-
54	48	49	47	49	48	48	48	46	35	-	-	-	-	-	-	-	-	-
55	42	43	42	43	40	36	-	-	-	-	-	-	-	-	-	-	-	-
56	41	42	41	42	42	45	44	46	47	46	47	47	48	48	50	48	48	49
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	38	36	35	38	37	36	37	36	36	37	37	36	35	35	36	34	33	33
59	45	45	42	45	46	45	44	45	43	45	44	45	45	45	46	45	43	42
60	49	49	48	50	49	49	50	49	50	51	52	52	53	54	55	53	52	52
61	40	39	41	41	40	42	41	41	41	41	42	42	42	44	44	42	41	42
62	40	42	41	44	43	43	44	44	44	47	47	47	47	46	48	48	46	-
63	49	46	44	45	45	47	47	46	47	48	49	48	49	50	52	51	49	50
64	53	54	52	56	55	56	55	56	56	57	57	57	58	57	59	55	-	-
65	44	45	44	45	45	47	46	46	46	47	45	46	46	47	48	45	44	43
66	38	33	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	49	51	49	52	53	54	53	53	54	54	54	54	56	56	58	56	57	55
68	49	48	50	51	51	50	50	52	52	51	51	51	51	51	51	49	48	48
69	42	42	44	46	45	44	45	47	42	47	46	47	47	46	50	49	47	49
70	42	43	42	44	43	43	43	44	45	46	45	44	45	45	46	44	39	-
71	52	52	52	54	54	54	53	53	51	52	53	54	53	55	57	55	54	54
72	43	44	44	46	46	47	46	48	46	48	48	50	48	47	50	50	46	-
73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74	48	49	48	51	50	51	53	54	54	55	54	54	54	53	54	49	42	33
75	40	40	37	38	38	38	36	-	-	-	-	-	-	-	-	-	-	-

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 2 $\sigma$ : 100 mg Glyphosate.kg $^{-1}$ .day $^{-1}$ 

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
76	26	29	30	31	32	32	34	36	36	36	37	37	39	40	41	42	42	43	45	46
77	28	31	32	33	35	35	36	37	36	38	38	39	41	41	42	41	43	44	45	46
78	24	28	29	30	31	31	33	34	33	33	34	33	34	35	35	36	36	38	38	38
79	27	29	30	30	32	33	34	35	35	36	36	37	39	39	38	38	38	40	40	40
80	27	30	32	34	36	37	38	39	40	40	41	41	42	44	43	44	43	44	44	44
81	26	28	30	29	30	30	31	32	31	31	32	34	34	35	34	35	35	36	37	37
82	27	30	31	31	34	36	37	38	38	39	40	40	41	42	43	43	43	45	45	45
83	29	32	35	36	39	41	44	46	46	47	48	50	53	53	55	55	57	61	61	65
84	29	31	33	35	38	39	39	40	42	41	43	44	45	45	46	46	46	47	49	48
85	27	29	31	32	33	33	34	35	35	34	35	36	36	38	38	37	38	38	39	41
86	26	28	28	29	31	33	35	35	35	36	36	37	38	39	39	39	39	41	41	42
87	25	28	29	32	33	35	35	37	37	37	38	38	39	40	40	41	43	43	44	
88	26	28	29	31	32	33	34	36	36	35	36	36	36	38	37	38	40	40	41	43
89	26	27	30	32	32	33	33	34	35	35	36	38	38	39	39	40	41	43	43	45
90	27	30	31	31	33	35	36	36	36	37	37	38	39	41	41	42	42	42	45	
91	27	27	28	28	28	30	30	31	32	32	31	32	32	32	33	34	34	35	39	37
92	26	30	31	32	33	35	36	36	36	36	36	37	37	37	38	38	38	39	36	40
93	26	27	28	30	31	32	34	35	36	36	36	37	38	38	39	40	40	42	43	44
94	26	27	27	29	29	30	32	32	32	32	32	32	33	33	35	35	34	34	35	35
95	26	28	29	30	31	32	33	34	35	35	34	36	36	37	38	39	39	41	43	44
96	26	29	30	31	32	34	35	36	36	37	36	38	38	38	38	40	40	39	41	45
97	26	27	27	28	30	29	31	31	31	33	32	33	34	34	35	35	35	37	38	39
98	25	28	29	31	31	32	34	34	34	35	35	36	36	35	35	37	35	38	37	39
99	25	26	28	29	30	30	32	33	33	34	33	34	34	34	35	35	35	36	37	38
100	28	31	32	34	35	36	36	36	36	37	37	38	38	38	38	39	39	39	41	

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 2♂: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
76	47	47	46	48	48	46	47	47	47	48	48	48	48	49	50	49	47	46	46
77	46	46	45	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78	37	39	41	42	41	41	43	42	42	43	44	44	45	45	46	46	45	44	44
79	41	42	42	43	42	42	43	43	44	43	-	-	-	-	-	-	-	-	-
80	45	46	45	46	46	46	47	45	-	-	-	-	-	-	-	-	-	-	-
81	38	39	39	40	39	39	40	41	40	40	40	42	42	43	41	39	38	-	-
82	47	48	48	46	45	47	44	46	46	46	46	45	47	46	47	45	-	-	-
83	67	67	68	69	68	69	69	70	68	66	66	64	-	-	-	-	-	-	-
84	49	51	50	51	50	50	51	51	48	50	51	50	50	50	50	49	47	46	47
85	41	42	41	43	42	43	44	43	43	43	44	42	42	44	44	43	42	42	42
86	43	45	43	45	44	45	45	45	44	44	45	46	45	47	41	-	-	-	-
87	46	46	43	46	45	46	47	47	47	47	48	46	45	45	45	43	40	39	38
88	43	44	43	45	44	44	45	46	45	46	46	45	46	46	45	44	44	43	-
89	44	42	42	43	42	41	36	-	-	-	-	-	-	-	-	-	-	-	-
90	46	46	45	46	46	43	43	42	42	41	43	43	43	42	45	44	41	41	42
91	37	37	37	39	39	39	39	39	40	39	40	41	40	41	42	43	41	40	41
92	41	41	42	43	41	43	43	45	43	43	44	44	46	46	-	-	-	-	-
93	44	45	44	46	46	46	48	47	48	49	49	49	50	50	50	-	-	-	-
94	36	36	37	37	35	36	35	35	34	35	36	35	35	37	38	36	35	36	35
95	45	46	46	48	48	50	49	50	50	51	50	50	49	50	-	-	-	-	-
96	46	46	45	46	45	46	45	46	46	46	47	46	46	38	44	43	40	40	40
97	41	41	41	43	42	43	42	42	40	44	44	44	44	45	44	41	-	-	-
98	39	40	39	41	42	41	42	42	40	42	44	45	46	46	48	47	46	46	45
99	40	39	39	41	39	41	40	41	40	40	42	41	42	43	43	43	39	36	36
100	42	41	40	43	42	42	41	42	44	42	42	43	42	44	43	42	41	38	32

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 3♂: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
101	29	33	34	36	37	38	40	41	41	41	41	43	44	45	45	46	47	47	45	47
102	26	29	30	32	32	33	34	35	36	38	38	38	38	38	39	39	39	38	40	42
103	27	29	31	32	33	34	35	37	37	38	40	41	41	42	43	43	44	45	46	48
104	25	27	30	31	32	33	32	33	33	34	35	35	35	35	35	35	34	34	35	36
105	26	29	30	31	31	33	33	34	34	34	33	34	34	35	35	35	35	35	36	36
106	28	29	31	31	32	34	34	35	36	36	37	38	40	39	40	41	41	42	44	46
107	28	29	31	33	34	36	36	37	37	37	37	37	38	39	39	39	39	39	39	42
108	30	32	34	36	37	38	38	41	41	43	44	45	46	47	49	50	51	50	48	51
109	26	28	30	32	31	31	32	33	35	37	36	36	38	38	38	36	37	38	38	42
110	25	27	30	31	32	32	32	34	34	36	36	35	36	37	37	37	39	40	42	43
111	24	27	29	31	32	33	34	35	34	35	35	35	37	37	37	37	39	40	41	41
112	28	30	32	34	35	35	36	36	37	38	39	42	44	45	45	45	44	43	44	44
113	26	29	31	32	32	33	33	33	33	34	34	34	34	33	35	35	35	36	37	36
114	25	28	30	32	32	34	34	34	34	35	35	35	35	36	35	35	36	37	39	
115	29	32	35	36	38	38	39	39	41	40	40	42	41	43	42	42	41	42	42	43
116	26	28	30	31	32	33	35	34	36	37	37	39	39	41	42	43	45	45	48	50
117	23	26	28	29	30	31	33	34	35	36	38	40	41	41	42	43	45	45	47	49
118	29	32	32	35	34	35	36	36	37	37	37	36	38	38	39	38	40	40	42	
119	27	31	32	31	33	35	35	36	36	36	36	39	39	39	41	41	42	42	44	48
120	28	30	32	34	35	37	39	40	42	42	44	47	48	51	51	52	55	55	59	60
121	27	29	31	31	34	35	34	36	37	37	38	39	39	40	40	41	42	43	43	46
122	27	29	32	34	34	35	36	37	38	38	38	38	38	38	38	39	39	39	40	41
123	27	29	31	33	33	34	35	36	35	35	36	35	35	38	38	38	39	39	39	
124	29	32	34	35	35	35	36	35	36	36	36	38	38	38	38	39	39	41	42	
125	25	27	29	31	32	32	33	34	33	34	34	34	34	34	35	36	37	38	39	41

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 3c: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
101	47	48	47	49	47	47	50	51	51	52	55	54	53	54	52	53	50	49	50
102	41	43	42	44	43	43	43	43	43	42	43	44	43	43	44	44	43	41	42
103	48	48	48	51	46	48	48	48	47	47	48	48	49	49	48	48	46	45	43
104	36	36	36	37	36	36	38	37	38	37	38	37	37	35	30	-	-	-	-
105	36	37	36	38	36	37	38	38	37	38	38	38	-	-	-	-	-	-	-
106	46	47	47	49	47	47	48	48	47	48	48	48	48	48	49	48	47	48	48
107	40	41	41	45	43	43	43	44	43	42	43	44	44	43	43	44	42	41	40
108	51	52	43	44	44	45	47	46	46	48	49	47	46	-	-	-	-	-	-
109	39	41	41	43	40	42	42	44	43	43	44	45	45	44	48	48	49	47	-
110	43	44	43	46	45	45	47	47	46	47	47	47	48	49	49	48	48	48	-
111	42	42	42	43	42	41	43	44	45	45	46	45	45	42	46	47	44	44	46
112	46	44	42	44	43	45	46	44	44	46	47	46	45	47	48	47	45	43	-
113	37	36	35	38	37	37	36	36	37	37	37	36	37	37	37	37	35	36	37
114	39	39	37	40	39	39	39	39	39	40	40	40	39	40	40	41	39	40	39
115	43	43	42	43	41	43	43	42	42	42	42	43	42	42	42	42	40	41	41
116	51	53	50	54	51	52	53	54	55	55	54	54	55	58	58	58	56	56	55
117	49	50	50	54	53	53	53	54	54	54	54	55	56	55	55	56	54	53	52
118	42	43	41	43	42	42	45	43	44	45	44	43	44	46	45	45	43	44	43
119	46	45	46	48	48	48	50	47	-	-	-	-	-	-	-	-	-	-	-
120	60	61	60	63	61	58	62	62	63	63	61	61	59	62	62	59	57	54	51
121	45	46	46	47	46	47	48	48	46	48	48	50	50	51	51	50	51	48	49
122	41	42	40	42	42	43	43	43	45	45	43	45	45	46	45	47	46	46	46
123	40	40	40	41	42	41	42	41	40	40	42	43	44	45	44	-	-	-	-
124	41	40	40	41	41	42	42	43	43	42	46	42	44	44	44	44	42	42	42
125	39	39	39	41	40	39	40	-	-	-	-	-	-	-	-	-	-	-	-

- = Animal dead

APPENDIX 7 (continued)

Individual Body Weights (g): Males and Females

Group 3d: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
126	23	23	24	26	27	27	29	31	30	31	31	32	32	31	31	32	34	34	36	39
127	28	31	33	33	36	37	39	40	40	42	43	43	44	44	44	45	46	48	50	52
128	28	30	33	36	38	39	40	42	42	43	44	44	43	44	45	45	45	45	47	46
129	25	27	29	30	31	32	33	33	34	33	33	33	34	34	34	33	34	35	35	36
130	27	28	30	31	31	32	32	34	34	34	35	34	35	35	35	36	37	37	38	39
131	26	30	33	35	37	37	38	39	40	40	40	41	41	40	44	43	44	45	46	48
132	27	29	31	35	33	34	35	36	35	36	37	37	36	37	37	38	39	38	39	41
133	25	26	28	28	30	31	32	32	34	35	35	37	36	38	36	37	39	40	42	44
134	25	29	30	31	32	33	34	34	35	34	35	35	35	35	35	36	36	36	39	38
135	26	27	29	30	30	31	32	32	33	35	34	35	37	37	37	37	39	40	41	41
136	26	28	30	31	33	33	34	35	35	34	35	37	37	37	36	37	37	39	41	43
137	25	29	31	33	34	35	36	36	37	37	39	40	40	40	41	41	43	43	44	45
138	24	25	27	28	30	31	33	35	35	37	38	40	40	41	41	41	43	44	44	49
139	27	29	31	32	33	34	36	35	37	38	38	40	40	41	42	43	45	46	46	48
140	26	29	31	32	33	33	35	36	36	36	36	37	37	37	38	39	40	40	41	43
141	27	29	32	34	36	37	38	39	40	40	41	42	43	44	44	45	45	48	49	50
142	29	34	35	37	38	39	40	40	41	43	43	36	36	39	41	42	45	44	46	45
143	27	29	30	32	33	34	35	36	37	37	38	40	40	41	42	41	39	43	42	43
144	27	28	29	30	31	32	33	33	34	36	36	36	36	35	36	36	37	38	38	41
145	27	29	31	32	33	35	35	34	35	35	35	37	38	38	38	39	40	40	40	40
146	27	32	34	36	37	38	40	40	40	41	41	43	44	44	43	45	47	48	49	50
147	26	28	30	31	31	32	34	34	34	35	36	35	35	36	36	37	37	37	38	38
148	26	30	31	32	32	33	34	34	34	35	34	35	35	35	35	36	36	37	38	39
149	27	30	32	34	33	34	36	36	37	38	39	40	41	40	41	42	44	47	48	50
150	22	25	27	28	29	29	31	31	33	34	34	34	34	36	37	37	37	39	41	43

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 3d: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
126	40	41	39	42	42	43	43	44	45	45	46	-	-	-	-	-	-	-	
127	50	50	47	51	50	50	52	52	53	53	53	54	54	54	54	52	51	43	-
128	46	47	46	47	45	46	47	47	47	47	47	46	46	47	45	46	44	-	
129	36	36	36	38	38	37	39	38	38	39	38	38	36	36	38	39	38	39	38
130	37	38	37	40	38	39	40	39	39	39	40	40	40	40	40	39	39	40	
131	47	48	44	47	44	44	45	44	44	45	43	-	-	-	-	-	-	-	
132	41	42	42	43	43	44	45	45	45	45	45	44	44	-	-	-	-	-	
133	44	44	44	44	42	43	43	44	45	46	45	45	46	47	46	46	47	46	
134	38	39	39	40	38	40	41	40	34	-	-	-	-	-	-	-	-	-	
135	42	42	42	43	42	42	44	44	43	44	44	44	45	45	43	43	43	41	42
136	45	45	44	48	45	48	48	49	49	50	50	51	51	52	52	51	-	-	-
137	43	47	45	47	45	46	47	46	47	47	47	48	49	50	50	49	47	46	47
138	48	48	48	50	48	49	47	48	49	52	52	54	54	54	53	52	52	51	
139	51	52	50	51	48	49	48	46	42	37	-	-	-	-	-	-	-	-	
140	43	43	41	42	41	40	41	41	41	40	40	41	42	41	41	40	40	40	
141	51	52	51	52	51	52	53	54	54	51	38	-	-	-	-	-	-	-	
142	46	38	40	40	38	35	35	32	32	31	31	31	30	-	-	-	-	-	
143	42	44	43	44	43	42	43	43	43	42	42	44	43	44	44	43	42	43	42
144	42	44	45	47	47	46	47	48	47	47	47	48	47	48	49	48	48	47	47
145	42	42	41	43	40	41	41	41	42	43	43	43	42	42	41	42	41	40	41
146	51	51	49	51	47	48	48	48	48	47	47	47	47	48	47	44	43	43	43
147	40	39	38	41	39	40	40	40	40	40	-	-	-	-	-	-	-	-	
148	40	40	40	43	41	42	42	41	40	40	41	41	42	42	41	38	-	-	-
149	52	54	53	57	55	55	56	57	56	57	58	59	61	63	64	62	59	60	57
150	45	46	46	47	47	48	50	50	51	52	51	53	54	54	53	52	50	49	53

- = Animal dead

APPENDIX 7 (continued)

Individual Body Weights (g): Males and Females

Group 4 $\sigma$ : 1000 mg Glyphosate.kg $^{-1}$ .day $^{-1}$ 

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
151	28	31	33	34	34	35	37	38	37	37	38	38	39	39	40	41	42	42	43	44
152	26	29	30	33	34	35	36	36	36	37	37	38	37	38	39	40	41	42	43	
153	28	31	33	35	32	36	38	38	38	38	39	39	39	40	40	40	41	41	41	41
154	29	32	35	37	39	40	41	42	44	45	47	49	49	50	52	53	54	55	56	58
155	26	28	29	31	32	32	34	34	34	34	35	36	36	36	37	37	37	37	38	-
156	26	28	30	32	32	32	32	32	34	34	35	35	35	35	36	36	37	36	37	37
157	24	26	28	30	30	31	32	33	34	35	36	36	37	37	38	38	40	41	42	44
158	28	31	32	32	34	35	36	36	38	38	39	40	42	42	43	45	47	48	49	
159	27	30	32	34	35	36	37	36	37	37	37	38	39	39	39	39	39	39	39	42
160	24	26	28	30	32	33	34	34	36	37	38	39	39	39	41	41	43	43	44	47
161	26	31	33	35	35	36	38	37	37	37	38	38	39	39	39	41	41	42	44	
162	27	31	32	34	35	35	36	37	37	37	37	38	39	40	40	41	43	43	44	46
163	26	28	29	30	30	31	32	33	35	35	34	36	36	38	38	37	38	39	41	-
164	27	31	34	36	38	39	40	40	41	43	42	43	44	44	45	46	45	47	47	48
165	30	33	35	36	39	41	41	41	42	43	43	45	45	46	46	47	48	48	52	53
166	28	31	33	35	36	37	38	39	40	41	41	44	44	45	46	46	46	48	49	51
167	26	26	27	28	29	29	31	31	32	32	32	34	33	34	36	34	35	35	36	37
168	27	31	32	34	35	36	37	36	37	37	37	38	38	39	39	39	39	39	39	
169	30	32	34	36	37	39	41	43	42	44	43	44	44	47	48	48	47	48	52	54
170	30	32	35	36	37	37	38	39	40	42	42	43	43	44	45	46	45	46	46	47
171	27	30	33	35	35	38	39	38	40	41	41	41	42	42	42	42	41	44	42	46
172	26	28	30	32	33	35	36	35	36	36	37	37	36	37	38	38	38	38	38	41
173	26	29	32	35	36	36	38	39	40	40	41	41	42	43	44	46	47	49	50	53
174	25	27	29	31	32	33	33	33	33	35	34	34	34	34	32	34	35	36	37	37
175	27	31	33	35	37	39	40	41	42	43	43	45	46	47	48	48	51	51	54	54

- = Animal dead

APPENDIX 7 (continued)

Individual Body Weights (g): Males and Females

Group 4d: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
151	45	45	43	45	44	44	44	44	44	44	45	44	45	44	45	45	43	45	43
152	43	43	41	45	43	43	43	43	44	44	43	44	43	42	43	43	41	42	42
153	41	42	40	43	41	43	42	42	44	43	43	44	44	-	-	-	-	-	-
154	60	60	60	63	61	61	61	60	55	-	-	-	-	-	-	-	-	-	-
155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
156	38	39	37	40	39	40	40	39	39	39	39	39	39	40	39	40	38	38	40
157	46	47	46	48	48	48	48	47	46	47	48	48	50	50	51	51	49	49	49
158	50	50	50	51	51	52	51	50	50	51	51	50	49	47	45	44	38	30	-
159	41	42	40	42	41	41	41	40	40	-	-	-	-	-	-	-	-	-	-
160	49	49	48	49	48	50	51	51	53	53	-	-	-	-	-	-	-	-	-
161	45	46	44	45	44	45	44	44	45	44	44	44	44	43	41	40	37	36	-
162	47	47	46	47	47	47	47	48	48	48	47	47	45	44	42	37	36	35	35
163	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
164	49	49	48	48	48	48	43	47	47	43	29	-	-	-	-	-	-	-	-
165	55	56	55	54	54	56	54	55	55	57	54	55	52	51	48	44	-	-	-
166	51	49	49	53	54	56	57	56	57	57	57	57	58	59	59	58	57	56	54
167	38	38	39	38	37	38	39	38	40	40	40	40	40	40	40	39	39	38	-
168	40	41	40	41	39	40	40	41	41	41	40	40	40	41	40	40	-	-	-
169	52	54	53	56	57	58	61	62	62	63	62	64	65	66	66	63	62	60	-
170	47	48	46	48	48	48	48	48	49	50	50	50	50	50	50	48	48	46	47
171	48	48	47	50	51	50	51	51	46	49	50	51	51	50	51	52	49	48	48
172	42	41	40	41	42	40	41	40	41	42	-	-	-	-	-	-	-	-	-
173	52	52	50	53	54	55	55	55	-	-	-	-	-	-	-	-	-	-	-
174	36	38	36	35	36	35	37	38	-	-	-	-	-	-	-	-	-	-	-
175	55	55	50	54	54	56	56	56	56	55	56	57	57	58	52	53	51	49	48

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 4d: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
176	26	32	35	37	39	40	42	42	44	45	46	47	49	50	50	50	52	55	57	60
177	26	31	33	35	35	36	37	37	38	38	39	39	39	40	41	40	40	42	42	43
178	26	29	31	33	33	34	36	36	37	38	38	39	39	39	41	41	41	40	43	43
179	26	29	32	33	34	35	36	36	37	38	38	39	39	39	40	40	40	40	41	41
180	25	28	29	30	31	32	33	33	35	36	36	36	37	38	38	40	40	41	43	43
181	27	30	33	35	36	37	38	37	37	38	38	40	40	40	40	41	40	42	41	42
182	26	30	33	35	34	36	37	38	39	40	40	40	41	41	42	42	43	43	43	46
183	26	29	31	32	35	36	38	38	40	41	41	43	44	45	47	47	49	51	52	55
184	28	31	34	35	36	37	38	38	38	40	39	38	39	39	40	41	40	42	43	45
185	25	27	30	31	30	32	34	33	33	34	35	36	36	36	36	37	38	38	38	40
186	26	28	31	32	32	34	35	35	36	38	39	37	36	37	37	38	38	38	39	42
187	27	29	33	35	35	37	37	38	40	40	40	41	41	42	43	43	44	46	49	50
188	25	28	31	33	34	34	36	35	35	37	36	36	36	36	37	37	39	39	41	43
189	25	26	25	26	27	27	29	29	29	30	29	28	27	29	30	31	-	-	-	-
190	28	30	32	32	35	36	37	38	40	40	41	41	43	43	43	43	44	45	45	47
191	22	24	26	26	28	29	30	30	32	31	32	32	31	31	32	32	33	34	35	35
192	27	31	32	34	35	36	37	37	38	38	39	40	40	41	41	42	41	44	44	41
193	27	29	30	31	31	33	34	33	33	34	35	34	34	35	34	35	36	35	37	38
194	26	29	31	33	35	37	38	38	37	38	39	40	41	41	42	42	43	46	46	49
195	27	30	33	35	37	37	38	38	37	39	39	41	41	41	42	43	42	43	44	44
196	24	26	27	28	30	31	32	32	32	33	33	34	33	34	35	35	34	35	35	36
197	28	32	34	36	36	37	39	38	39	40	41	41	40	41	42	42	44	48	49	50
198	28	31	34	36	36	38	40	41	41	42	42	44	46	46	48	48	46	45	53	52
199	25	26	29	30	30	32	32	32	33	34	33	34	35	35	37	37	36	37	37	38
200	27	30	32	34	34	35	36	36	36	37	38	38	38	38	40	39	41	42	43	45

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 4d: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
176	60	62	59	61	63	64	63	63	65	66	64	65	65	65	61	60	58	54	52
177	44	45	43	44	44	44	45	46	45	46	46	46	47	47	47	45	44	45	46
178	45	47	43	42	43	44	45	45	46	46	47	46	46	45	43	-	-	-	-
179	42	43	41	40	41	42	42	42	42	42	42	42	43	42	41	-	-	-	-
180	44	45	42	42	42	43	43	42	41	35	35	-	-	-	-	-	-	-	-
181	43	44	44	45	46	45	47	47	46	46	46	46	46	45	44	42	39	36	33
182	46	46	46	46	47	47	47	46	47	47	45	45	45	45	44	42	42	42	42
183	57	57	57	58	58	57	59	59	59	60	60	60	62	60	59	51	35	-	-
184	44	45	44	43	44	44	44	44	42	43	43	44	44	43	45	44	44	42	42
185	38	40	40	40	40	39	40	40	40	41	41	40	41	41	41	41	40	40	41
186	42	44	42	44	44	44	45	45	46	47	48	47	50	49	51	48	47	48	47
187	50	52	51	50	50	51	51	51	52	52	52	52	53	53	52	51	49	49	48
188	43	44	41	41	42	42	43	41	42	42	42	38	-	-	-	-	-	-	-
189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
190	48	47	45	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
191	35	36	34	36	36	36	36	35	36	36	36	36	37	36	36	37	36	36	36
192	44	46	46	49	46	48	50	50	50	50	52	53	52	53	53	52	49	50	49
193	38	40	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
194	49	50	47	48	49	48	49	49	50	50	50	51	52	51	53	51	48	48	46
195	40	39	39	40	39	37	-	-	-	-	-	-	-	-	-	-	-	-	-
196	36	35	35	37	37	37	36	36	37	37	36	37	38	37	38	37	37	38	44
197	52	52	52	53	53	53	54	54	52	54	52	51	49	47	42	31	-	-	-
198	54	55	56	60	59	60	57	59	59	60	59	61	61	60	61	-	-	-	-
199	38	39	37	40	40	40	41	40	40	41	40	41	41	41	42	41	39	40	40
200	46	46	43	46	45	45	45	45	45	46	44	45	45	45	45	43	41	39	39

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 19: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
201	19	20	21	22	22	21	20	22	24	25	26	26	26	26	26	29	27	27	26	
202	23	21	22	22	23	25	26	26	27	27	27	28	28	30	31	30	30	31	34	30
203	21	21	22	23	24	24	25	24	27	25	27	27	27	29	27	30	30	31	34	35
204	23	23	25	25	26	28	28	27	27	28	29	29	29	29	30	31	29	30	30	32
205	21	21	24	24	24	25	27	28	28	28	29	31	30	31	31	33	33	33	34	31
206	22	22	23	24	26	27	28	29	29	28	29	30	30	32	32	31	35	35	37	35
207	23	24	24	25	24	26	27	29	29	28	29	30	30	32	30	32	32	35	37	37
208	21	23	23	24	25	27	28	28	30	30	29	30	32	33	31	33	33	36	41	42
209	23	22	24	24	25	26	26	28	28	28	27	30	28	30	30	31	33	31	31	32
210	21	23	23	24	25	26	27	26	27	27	28	28	29	30	30	31	32	34	38	39
211	22	23	23	25	26	26	27	29	28	28	29	31	31	31	32	33	36	34	35	34
212	21	22	23	22	25	25	25	25	25	25	26	26	27	29	29	28	29	29	31	31
213	22	22	24	23	24	25	26	27	27	27	28	28	29	29	29	29	31	32	33	33
214	24	24	25	26	27	28	30	34	30	31	32	35	37	38	38	39	39	40	39	39
215	23	24	26	27	28	29	31	32	33	34	34	34	36	38	38	38	38	41	42	45
216	22	22	23	24	25	26	28	28	29	28	28	29	29	30	31	30	31	34	33	35
217	23	23	24	24	25	25	25	26	27	27	26	26	27	27	28	28	29	30	31	31
218	19	19	22	22	24	24	26	24	25	26	26	26	27	26	26	27	28	28	26	27
219	21	22	22	23	23	24	25	27	28	26	27	28	28	29	29	29	29	32	30	
220	23	24	25	27	28	28	29	30	30	30	30	30	32	31	31	34	33	36	40	
221	20	21	23	23	24	25	25	26	27	26	27	27	26	28	28	28	28	-	-	
222	24	26	26	28	29	29	31	30	33	35	33	35	39	36	37	38	38	39	41	43
223	22	22	23	24	25	26	26	25	25	26	26	27	27	27	29	27	28	27	27	
224	22	22	24	25	25	27	29	29	28	28	29	28	29	29	30	30	30	31	33	32
225	19	20	21	21	22	23	24	24	26	26	26	26	26	27	27	27	28	30	31	31

- = Animal dead

APPENDIX 7 (continued)

Individual Body Weights (g): Males and Females

Group 19: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
201	27	27	27	29	28	27	27	29	28	28	28	26	26	25	27	25	23	24	25
202	30	30	31	38	37	33	35	35	38	39	37	35	31	-	-	-	-	-	-
203	37	38	39	42	39	38	39	38	38	-	-	-	-	-	-	-	-	-	-
204	32	33	32	34	32	33	33	33	33	34	35	33	34	35	34	34	35	35	34
205	33	33	34	34	39	37	37	35	33	36	37	37	37	39	37	36	37	38	38
206	36	39	38	40	41	42	43	37	38	39	37	37	40	38	39	37	40	43	50
207	38	40	41	41	40	40	43	44	42	45	44	44	41	29	-	-	-	-	-
208	41	44	46	45	46	47	45	40	37	35	35	36	36	39	36	36	34	35	37
209	33	32	32	33	34	32	33	32	33	33	34	34	35	35	35	36	-	-	-
210	40	40	41	42	41	42	44	44	45	46	45	45	43	43	44	43	41	43	43
211	38	41	43	45	47	47	48	48	49	47	50	51	54	52	56	54	54	52	48
212	32	32	32	33	36	34	36	34	34	36	36	37	36	36	40	37	34	-	-
213	34	35	36	39	38	38	39	39	39	39	40	39	41	43	-	-	-	-	-
214	42	42	44	46	48	48	50	48	50	51	51	50	51	52	53	53	46	48	50
215	44	46	47	47	48	47	45	46	46	47	47	48	48	48	46	-	-	-	-
216	35	36	36	38	39	37	38	38	36	39	40	37	41	40	40	40	39	39	40
217	31	32	31	35	34	33	34	35	37	36	36	36	37	37	37	37	37	26	-
218	29	27	28	30	29	29	31	30	29	31	30	31	31	30	34	32	32	31	32
219	31	32	32	32	34	34	35	36	34	36	34	36	32	-	-	-	-	-	-
220	39	40	41	45	46	43	44	43	46	48	50	50	51	52	52	51	51	50	49
221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
222	46	43	46	46	48	47	49	51	53	53	51	52	52	49	49	29	-	-	-
223	27	28	32	33	34	31	32	33	34	34	35	35	35	-	-	-	-	-	-
224	32	34	33	33	34	32	34	33	33	34	37	35	38	54	-	-	-	-	-
225	32	32	34	34	37	36	36	39	36	-	-	-	-	-	-	-	-	-	-

- = Animal dead

APPENDIX 7 (continued)

Individual Body Weights (g): Males and Females

up 19: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
26	21	20	22	23	26	28	29	30	31	30	31	31	33	35	31	32	33	34	36	34
27	22	22	25	27	29	29	31	30	32	32	33	33	34	34	34	35	36	37	38	39
28	24	24	26	27	29	30	31	30	31	31	32	32	33	33	34	33	35	36	37	
29	23	24	25	25	26	27	29	28	29	28	28	29	29	31	30	30	33	34	36	38
30	17	18	20	20	20	21	23	22	23	23	24	24	24	25	24	25	25	25	27	28
31	21	23	24	25	25	26	27	27	29	28	28	29	28	31	28	28	30	33	29	33
32	21	20	21	20	21	21	22	22	23	23	23	23	23	24	24	24	25	25	26	27
33	21	21	22	21	22	23	24	24	24	24	25	26	26	27	26	27	27	29	28	29
34	22	24	26	25	26	28	29	28	29	29	31	31	31	33	32	33	37	35	36	39
35	19	20	22	22	23	22	25	24	25	25	25	26	25	25	26	25	28	28	29	30
36	21	21	23	23	24	24	26	26	27	27	27	30	29	30	30	33	33	38	35	41
37	23	22	24	23	25	27	29	28	29	29	30	30	30	30	30	31	31	33	33	34
38	21	21	23	23	24	24	25	26	26	26	27	27	27	29	27	27	28	31	31	33
39	19	20	22	22	23	24	24	24	25	25	25	26	29	27	27	27	29	30	30	31
40	21	23	23	24	25	25	27	28	28	28	29	30	30	31	32	33	35	37	39	43
41	18	19	22	23	24	25	27	27	28	27	27	27	28	29	30	30	31	30	33	32
42	22	23	25	25	26	27	28	28	28	28	28	28	29	30	30	30	30	31	32	35
43	21	21	23	22	24	25	26	27	27	27	27	27	27	29	30	29	31	32	31	34
44	23	24	25	25	26	28	28	28	30	28	30	30	30	30	30	30	29	30	30	29
45	21	21	22	23	24	24	25	25	25	26	26	26	27	27	27	27	29	29	34	35
46	19	20	22	22	23	24	25	26	25	25	26	26	26	26	26	27	29	28	29	31
47	23	24	25	26	26	28	26	26	26	26	27	27	27	27	27	28	28	29	30	28
48	20	21	22	22	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
49	22	22	22	23	24	24	25	25	26	25	26	26	28	28	30	32	31	32	32	34
50	23	25	26	26	30	29	31	31	32	33	32	32	32	35	32	33	32	34	36	36

Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 2♀: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
251	22	23	26	27	29	30	32	32	33	30	32	33	34	32	32	33	34	34	32	33
252	21	21	23	24	25	25	26	26	27	27	26	26	27	27	27	27	28	24	28	29
253	22	23	24	25	27	27	28	27	28	28	29	30	30	31	32	32	34	35	38	34
254	21	21	24	23	25	25	26	26	25	26	26	26	27	27	27	27	27	29	29	30
255	19	19	21	21	23	23	24	23	24	24	25	25	25	26	26	26	27	28	29	28
256	20	23	26	26	27	27	28	28	29	29	30	31	30	31	32	32	34	35	35	37
257	22	22	24	24	25	26	27	27	28	28	28	28	28	28	28	29	31	30	33	34
258	20	21	22	23	23	23	25	25	26	26	27	27	30	28	29	28	31	30	31	32
259	22	21	24	25	26	27	28	28	28	28	28	29	29	31	29	30	31	34	34	34
666	22	23	24	24	25	25	26	25	26	25	26	27	28	28	28	29	30	30	30	31
261	19	21	22	22	23	23	26	24	26	25	26	26	27	28	27	27	29	30	32	31
262	21	22	23	23	24	24	24	24	25	25	26	26	26	27	27	28	29	30	32	31
263	20	21	22	22	23	24	25	26	27	26	27	28	29	32	28	29	36	35	39	39
264	23	24	26	27	27	29	30	30	31	31	32	32	33	34	35	36	38	41	42	42
265	20	21	21	21	21	21	24	24	24	24	24	25	25	27	26	26	27	28	28	28
266	21	22	22	24	24	24	25	26	26	26	26	25	25	25	25	25	26	27	27	28
267	19	20	21	21	22	22	23	23	24	23	24	23	24	24	24	24	28	27	27	28
268	21	20	23	25	25	27	28	28	28	27	29	29	29	30	31	31	33	33	33	35
269	20	22	24	25	27	27	28	28	28	28	30	29	30	31	31	33	33	35	38	
270	22	23	26	26	28	28	30	30	32	32	33	33	34	36	36	37	38	34	34	33
271	21	23	23	25	27	27	26	25	26	26	27	28	28	28	31	29	29	34	31	32
272	21	22	24	24	26	27	26	26	27	27	28	28	29	29	29	30	30	31	34	34
273	20	20	23	24	25	25	27	27	29	29	28	28	28	30	30	29	29	29	31	31
401	<sup>a</sup> 23	<sup>a</sup> 24	24	24	25	26	25	25	26	27	27	27	27	28	b	-	-	-	-	-
275	24	25	27	26	28	28	29	29	29	30	31	32	33	35	35	36	38	40	41	40

- = Animal dead

a = Value for Pretrial represents that of Animal No. 274♀ (not included in group mean); values from Week one onwards represent that of Animal No. 401♀

b = Animal missing from cage, presumed dead

Animal No. 260♀ was re-earnumbered Animal No. 666♀ during Week 15 to avoid equivocality

Animal No. 274♀ was replaced by Animal No. 401♀ during Pretrial due to it dying prior to the start of dosing

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 2♀: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
251	35	34	32	35	33	35	35	33	34	35	35	35	37	35	-	-	-	-	-
252	29	30	29	31	28	30	29	29	30	33	31	31	31	33	33	32	32	34	33
253	39	40	39	41	41	39	39	39	39	40	42	40	40	40	41	42	-	-	-
254	30	33	32	33	33	32	34	35	36	38	37	37	36	38	38	36	36	35	36
255	29	29	30	31	31	34	36	35	36	38	36	35	34	35	35	36	40	41	40
256	38	36	38	40	39	40	42	40	40	42	42	41	40	39	39	40	39	39	36
257	34	34	33	35	37	35	37	38	38	40	41	39	38	40	41	41	40	-	-
258	33	33	34	34	37	36	34	34	35	36	33	-	-	-	-	-	-	-	-
259	34	36	35	37	37	37	36	40	41	46	-	-	-	-	-	-	-	-	-
666	31	29	29	31	31	31	31	31	31	33	32	32	32	34	39	-	-	-	-
261	32	30	30	33	34	33	32	33	34	34	35	37	-	-	-	-	-	-	-
262	34	35	35	37	36	35	36	-	-	-	-	-	-	-	-	-	-	-	-
263	42	44	43	43	41	42	43	43	43	43	44	42	-	-	-	-	-	-	-
264	45	46	47	49	48	48	49	49	51	58	-	-	-	-	-	-	-	-	-
265	29	28	28	28	28	28	29	30	31	30	32	31	32	31	33	33	33	33	34
266	27	28	29	29	31	28	28	28	28	29	29	29	29	29	-	-	-	-	-
267	29	30	29	30	32	32	30	34	34	36	36	36	37	37	40	39	39	41	40
268	36	37	38	40	40	40	39	40	41	44	43	42	42	42	44	43	43	42	41
269	39	39	40	42	42	41	42	43	43	44	44	45	44	48	48	47	49	47	48
270	36	34	33	34	34	33	33	34	34	33	35	35	34	36	37	37	37	39	40
271	34	34	33	35	36	31	33	33	33	35	37	37	42	33	32	26	-	-	-
272	34	37	34	37	36	35	35	36	36	37	40	-	-	-	-	-	-	-	-
273	31	33	31	35	33	34	36	36	39	43	40	47	-	-	-	-	-	-	-
401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
275	40	45	41	43	43	43	45	42	44	44	46	45	46	45	45	45	43	43	43

- = Animal dead

Animal No. 260♀ was re-earnumbered Animal No. 666♀ during Week 15 to avoid equivocality

Animal No. 274♀ was replaced by Animal No. 401♀ during Pretrial due to its poor condition

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 29: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
276	22	24	26	25	28	28	28	29	28	28	29	29	31	31	30	30	34	32	36	36
277	20	20	22	22	23	24	25	26	25	25	25	25	27	27	26	26	27	28	28	29
278	22	24	24	24	25	26	25	27	27	28	27	28	29	30	30	31	29	38	38	40
279	22	22	24	24	25	26	26	26	27	27	27	27	28	28	28	28	30	30	31	32
280	21	22	22	23	24	26	27	27	27	27	27	28	28	29	29	30	30	33	33	34
281	24	25	26	25	25	26	27	27	28	29	28	28	29	30	30	32	31	31	31	32
282	23	24	24	24	25	26	27	26	26	27	29	29	29	31	31	31	34	36	36	36
283	24	25	25	27	28	30	29	31	33	31	34	34	35	34	35	37	34	38	38	36
284	23	24	25	26	27	28	28	27	28	29	30	30	30	32	32	31	35	35	37	37
285	24	25	24	24	25	26	27	26	26	27	27	28	28	30	29	28	29	30	33	33
286	22	23	24	24	27	27	28	28	28	28	29	29	30	30	30	30	29	34	35	36
287	22	21	23	23	24	25	25	25	26	27	27	27	27	27	27	27	29	30	31	31
288	20	22	23	23	24	26	27	26	28	28	29	30	29	31	30	30	33	34	34	35
289	22	21	22	23	24	26	26	27	28	27	28	28	28	29	29	29	32	33	38	37
290	20	22	23	24	24	25	26	26	26	26	28	28	29	30	30	31	34	38	38	41
291	22	21	22	24	24	24	24	24	25	26	27	26	27	27	27	27	28	28	29	29
292	24	24	25	26	28	29	30	29	30	30	33	32	33	34	34	33	33	37	38	38
293	21	23	26	25	27	27	26	27	27	27	28	29	29	29	30	31	34	32	34	34
294	21	23	24	23	23	25	26	26	26	26	27	27	29	29	29	28	30	30	30	33
295	22	23	25	25	27	26	28	27	29	29	30	32	32	33	34	34	35	39	41	43
296	22	24	24	27	29	29	30	31	31	32	31	32	34	34	33	37	36	37	39	39
297	24	24	26	27	28	28	30	32	31	32	32	33	34	35	35	37	36	39	40	39
298	23	22	24	23	25	26	26	27	28	28	29	29	29	29	29	29	30	31	32	33
299	22	24	25	25	26	27	29	29	29	29	29	30	31	32	33	33	34	34	35	38
300	21	21	23	23	23	24	24	24	25	25	26	27	27	28	28	28	31	35	35	36

APPENDIX 7 (continued)

Individual Body Weights (g): Males and Females

Group 29: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
276	39	36	38	39	38	37	38	37	38	40	39	38	40	37	40	37	37	37	36
277	28	29	30	31	29	29	30	30	31	31	31	31	31	31	33	32	32	32	33
278	42	43	42	43	44	41	43	40	36	-	-	-	-	-	-	-	-	-	-
279	34	35	36	37	36	37	36	37	39	40	38	-	-	-	-	-	-	-	-
280	34	35	37	38	39	43	-	-	-	-	-	-	-	-	-	-	-	-	-
281	31	32	34	35	26	*	-	-	-	-	-	-	-	-	-	-	-	-	-
282	35	37	40	40	38	39	42	42	44	45	44	43	41	43	43	42	41	43	41
283	38	40	40	43	41	41	40	40	44	45	46	43	46	45	49	46	42	-	-
284	39	39	38	39	38	39	39	40	39	40	40	42	42	42	45	-	-	-	-
285	33	33	33	34	33	34	35	34	35	35	35	35	37	36	36	34	-	-	-
286	38	39	39	39	38	38	41	40	41	43	42	42	46	41	46	43	48	-	-
287	32	33	33	35	33	33	35	35	-	-	-	-	-	-	-	-	-	-	-
288	35	36	36	38	35	36	36	33	34	-	-	-	-	-	-	-	-	-	-
289	40	38	38	39	40	40	43	43	41	42	42	41	44	44	43	42	35	39	40
290	42	43	40	42	42	41	44	45	42	45	43	45	44	45	47	41	42	-	-
291	28	27	27	29	28	28	29	29	30	29	30	30	30	30	29	28	28	30	31
292	39	43	43	44	45	45	46	45	45	46	46	45	45	45	47	-	-	-	-
293	37	36	36	38	38	37	37	38	38	41	42	57	-	-	-	-	-	-	-
294	34	37	37	33	34	32	33	34	33	33	35	34	34	37	-	-	-	-	-
295	43	44	44	46	44	44	44	44	47	*	-	-	-	-	-	-	-	-	+
296	39	42	41	44	40	43	40	40	42	38	42	*	-	-	-	-	-	-	-
297	40	39	38	40	38	39	41	39	41	41	41	39	39	39	37	37	35	36	35
298	35	33	34	36	36	33	35	35	35	38	38	41	42	-	-	-	-	-	-
299	39	39	39	40	38	39	40	42	41	47	-	-	-	-	-	-	-	-	-
300	37	38	38	40	38	38	37	37	37	38	40	42	-	-	-	-	-	-	-

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 3: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
301	19	20	22	22	23	23	24	24	25	25	26	26	27	27	28	28	29	28	29	-
302	21	23	24	25	26	26	27	27	27	27	28	28	29	30	30	31	33	34	36	36
303	20	22	24	26	26	26	28	27	27	28	28	29	29	31	30	31	31	31	35	37
304	20	22	23	25	25	26	27	26	26	26	26	27	29	28	28	28	28	29	29	28
305	20	21	23	23	24	25	27	25	26	26	29	26	27	30	27	27	29	29	29	30
306	20	20	21	23	23	24	26	24	25	26	27	27	27	28	28	28	29	30	31	33
307	22	24	25	26	28	29	29	28	29	30	30	31	32	33	35	35	37	40	41	42
308	22	23	24	25	27	28	28	28	29	29	30	29	30	31	31	31	31	33	34	35
309	21	22	26	25	27	27	30	28	28	28	29	29	29	29	29	30	29	31	31	31
310	20	21	22	25	25	26	25	24	25	25	25	26	26	27	28	29	29	32	38	38
311	23	27	30	30	31	31	32	33	32	33	32	34	34	37	35	36	37	39	39	38
312	22	22	24	26	28	28	29	29	30	32	31	33	34	36	35	35	38	42	41	42
313	19	22	23	24	26	27	29	28	27	29	27	29	29	31	29	31	29	30	31	31
314	20	21	22	24	24	25	27	26	27	26	28	28	27	28	28	28	30	31	31	31
315	20	21	21	24	25	25	26	25	25	26	27	26	26	27	27	27	28	29	29	29
316	20	21	21	23	23	24	25	24	25	25	26	26	26	27	27	28	29	31	32	33
317	21	21	21	23	25	24	25	25	25	26	26	27	27	28	27	28	29	31	32	31
318	20	21	22	24	24	26	26	25	25	25	27	27	28	28	26	27	28	30	31	31
319	18	19	20	22	23	23	23	23	23	23	24	25	24	24	24	23	-	-	-	-
320	22	23	24	26	26	27	28	28	28	27	28	28	28	29	29	29	30	31	31	32
321	22	22	23	26	26	28	28	28	28	29	29	29	30	31	31	31	33	33	34	34
322	22	23	24	26	26	26	28	27	28	29	30	30	30	30	31	31	32	33	34	34
323	21	22	24	27	27	26	28	27	29	28	30	31	30	32	32	33	33	33	31	31
324	21	21	22	23	24	25	25	25	27	27	26	26	27	29	28	29	30	30	32	32
325	20	20	21	22	24	24	24	24	26	25	26	26	25	27	26	26	27	28	28	28

- = Animal dead

APPENDIX 7 (continued)

Individual Body Weights (g): Males and Females

Group 39: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
302	38	39	39	40	41	41	42	42	42	45	43	44	44	43	42	41	41	40	40
303	40	38	39	40	40	42	41	42	43	43	41	-	-	-	-	-	-	-	
304	29	29	29	31	30	28	32	29	30	30	31	30	29	31	29	29	29	29	
305	30	30	29	30	30	30	30	30	31	32	32	31	31	32	32	32	33	-	
306	33	33	33	35	34	34	36	34	36	35	36	37	38	38	37	38	35	36	
307	44	45	45	45	46	46	47	42	-	-	-	-	-	-	-	-	-	-	
308	39	37	36	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
309	31	31	32	32	33	33	33	34	36	37	40	39	39	42	41	40	41	41	
310	39	42	37	42	43	42	41	40	39	41	41	40	41	42	42	38	37	42	
311	41	38	38	37	38	37	40	40	40	43	46	41	41	44	43	42	43	42	
312	41	41	42	44	43	41	45	43	45	45	45	45	48	47	46	46	44	42	
313	32	32	32	33	33	34	34	34	33	34	34	34	35	36	36	35	35	36	
314	30	30	30	30	31	30	33	30	31	32	34	32	33	32	32	-	-	-	
315	32	31	33	33	34	34	36	35	35	36	37	37	38	39	40	41	41	47	
316	33	33	33	34	37	37	38	38	40	42	42	42	41	43	42	40	41	38	
317	33	32	32	35	35	34	34	34	35	37	37	37	36	38	39	38	36	-	
318	29	29	29	30	30	32	31	32	32	34	37	35	37	40	39	41	48	45	
319	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
320	31	32	33	34	32	32	35	34	34	35	34	34	35	34	34	37	37	-	
321	33	33	32	33	35	34	35	35	35	34	35	36	37	37	36	37	38	39	
322	36	34	35	36	35	34	35	36	36	37	37	37	38	39	39	38	38	38	
323	30	33	35	34	34	34	36	34	33	35	35	35	34	36	39	39	-	-	
324	34	32	35	35	34	38	35	34	35	35	-	-	-	-	-	-	-	-	
325	29	29	30	30	30	30	31	31	32	32	33	33	33	35	36	36	38	38	

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 39: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
326	22	22	22	24	25	25	27	27	28	28	30	30	31	31	32	33	37	42	43	45
327	22	23	27	29	33	31	31	34	33	35	33	34	37	35	34	36	35	38	40	43
328	18	17	19	20	22	21	22	22	24	24	25	24	25	25	25	25	25	26	26	26
329	23	23	24	24	26	27	27	27	28	28	29	29	30	31	32	32	33	35	36	36
330	22	24	25	26	27	28	30	30	30	30	30	31	32	33	32	32	33	35	36	36
331	23	24	25	26	26	27	28	27	28	28	28	28	28	30	30	30	31	32	32	33
332	20	20	20	22	23	24	26	26	26	26	27	27	27	28	28	29	30	31	31	30
333	22	22	23	23	25	26	28	27	28	28	29	30	31	33	33	33	34	36	36	37
334	23	24	25	26	28	29	30	31	32	32	32	33	33	35	34	34	34	38	36	36
335	22	22	22	24	25	26	28	26	27	28	27	28	28	29	28	29	30	30	32	32
336	20	21	23	23	23	24	26	25	26	26	27	27	28	29	28	29	30	32	31	32
337	21	23	25	25	27	28	29	29	28	29	31	29	30	32	29	30	30	33	32	33
338	22	23	24	26	27	28	30	28	29	29	30	30	30	32	31	32	33	35	37	36
339	21	22	22	24	24	25	26	24	26	26	27	27	26	27	27	27	29	30	31	31
340	21	23	24	25	26	27	29	28	28	28	29	29	29	29	29	30	32	34	36	38
341	26	27	28	28	29	29	31	33	34	33	34	35	36	38	36	37	39	37	32	-
342	22	21	22	23	23	25	26	26	27	29	28	28	29	30	30	30	30	32	31	32
343	22	22	25	25	28	29	29	28	28	29	29	30	30	33	31	31	32	34	33	33
344	22	23	24	25	26	26	27	27	27	27	28	29	30	30	30	30	30	30	30	31
345	20	21	23	23	25	26	28	27	27	28	29	29	30	31	31	31	32	33	33	34
346	21	21	23	24	25	26	26	27	27	27	27	28	29	29	29	30	30	31	30	31
347	20	21	22	23	23	24	26	26	25	25	26	27	29	27	28	28	29	31	31	34
348	21	22	24	25	26	26	28	28	28	28	28	29	29	31	30	30	32	36	33	36
349	21	20	22	23	24	25	28	27	26	28	28	28	28	28	30	30	30	32	32	33
350	22	22	23	24	26	27	28	28	27	27	27	28	28	30	30	31	31	32	31	33

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 39: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
326	46	48	47	48	49	46	50	48	48	50	48	46	46	42	43	42	45	-	-
327	40	41	41	40	41	39	42	41	39	44	42	43	43	42	41	-	-	-	-
328	27	25	27	28	28	28	29	31	30	34	38	-	-	-	-	-	-	-	-
329	37	40	40	42	43	41	41	40	43	42	40	40	40	40	39	38	33	-	-
330	38	37	37	37	37	37	38	38	37	38	38	38	39	39	39	34	35	35	-
331	34	36	35	35	36	34	37	38	37	37	38	40	41	40	40	40	67	-	-
332	31	31	31	32	32	33	32	31	34	33	33	33	33	34	34	35	34	34	34
333	37	36	37	37	38	38	39	40	38	40	41	40	41	40	39	40	40	40	42
334	38	36	36	36	37	33	36	35	35	35	36	39	38	40	40	38	35	39	36
335	31	31	32	33	31	31	34	31	31	33	32	33	34	35	38	35	35	35	38
336	32	32	32	32	33	35	34	33	35	35	35	36	37	38	39	35	37	36	38
337	31	31	31	33	32	31	31	31	31	32	34	33	33	33	33	33	32	34	34
338	35	38	37	38	38	45	38	-	-	-	-	-	-	-	-	-	-	-	-
339	32	33	32	33	34	34	37	35	32	34	36	33	34	33	37	33	34	35	34
340	37	39	38	41	40	41	42	40	42	43	46	42	35	34	34	33	32	30	30
341	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342	32	33	36	36	35	37	40	-	-	-	-	-	-	-	-	-	-	-	-
343	33	33	33	35	35	36	37	34	36	37	38	39	37	39	39	38	37	38	37
344	32	32	31	31	32	32	32	33	35	34	39	37	38	38	40	41	39	40	37
345	35	35	36	37	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-
346	33	33	33	33	34	34	35	35	35	34	36	35	36	36	36	35	35	36	39
347	35	36	36	37	37	37	36	35	37	38	38	37	39	41	41	39	37	39	40
348	36	37	38	37	37	38	40	38	38	45	-	-	-	-	-	-	-	-	-
349	33	32	32	33	33	34	32	32	33	34	35	35	35	35	34	34	34	36	35
350	34	31	30	31	32	31	36	33	34	34	35	35	35	37	36	35	36	36	37

- = Animal dead

APPENDIX 7 (continued)

Individual Body Weights (g): Males and Females

Group 49: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
351	21	22	25	26	27	27	27	28	28	28	29	30	30	32	31	33	36	37	35	35
352	22	23	26	27	29	30	30	30	32	30	32	33	34	34	35	34	36	35	37	36
353	21	20	22	23	24	24	26	25	25	25	27	27	27	27	28	29	30	31	34	33
354	22	22	24	26	27	28	28	28	30	28	30	29	30	31	31	32	32	34	35	35
355	22	23	24	25	27	27	28	29	30	30	30	31	31	33	32	32	34	34	35	36
356	21	22	23	24	26	27	27	27	29	30	29	29	29	30	30	31	31	36	36	37
357	19	22	24	26	27	28	26	27	28	27	28	29	29	29	29	31	33	38	40	40
358	22	22	23	23	26	26	25	26	27	26	27	27	28	28	28	29	29	31	33	35
359	20	21	22	25	26	27	27	27	28	27	28	28	28	28	29	29	28	34	31	35
360	22	23	24	25	26	26	26	26	26	27	28	28	29	28	29	29	30	30	31	31
361	21	22	24	25	28	27	28	29	30	29	29	30	30	29	29	30	32	31	37	-
362	23	23	23	25	26	26	28	29	31	32	33	32	34	34	34	35	37	34	37	35
363	20	22	25	26	28	26	28	28	28	29	28	28	30	31	31	29	31	33	35	36
364	20	22	23	24	25	26	26	25	28	27	28	27	28	29	29	29	31	34	34	36
365	22	22	23	25	25	26	26	26	27	26	27	28	27	28	28	28	28	31	30	30
366	20	21	22	23	24	24	25	24	24	24	24	25	25	25	25	26	27	28	29	30
367	23	24	27	30	30	31	31	32	32	32	34	33	35	35	34	38	38	40	42	44
368	19	19	20	21	22	23	23	23	23	23	24	24	24	23	25	24	25	26	26	28
369	21	22	24	26	27	27	27	28	29	29	30	30	30	31	30	31	33	33	37	36
370	22	22	23	26	27	27	28	27	28	28	29	29	29	30	30	31	32	33	33	34
371	20	23	24	25	26	28	28	28	30	29	29	30	30	30	31	30	31	32	31	35
372	22	23	25	26	28	28	28	28	28	29	31	32	34	35	36	36	39	42	42	42
373	19	20	20	23	24	25	26	25	27	27	27	29	29	28	30	33	32	30	37	34
374	20	21	25	26	28	28	29	29	30	31	31	32	32	32	33	34	34	38	37	37
375	21	22	23	24	25	26	26	26	27	28	28	28	28	31	31	30	33	39	37	36

- = Animal dead

APPENDIX 7 (continued)

Individual Body Weights (g): Males and Females

Group 49: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
351	45	42	41	42	43	42	45	43	43	46	44	42	38	37	38	-	-	-	-
352	37	37	36	37	38	38	36	38	36	38	39	38	39	38	40	38	38	39	39
353	32	36	33	36	36	37	38	36	37	36	35	36	37	38	39	38	37	37	40
354	36	37	35	39	38	37	39	37	38	40	39	39	39	40	40	39	38	39	38
355	37	37	35	38	37	39	40	38	40	39	41	39	41	40	40	40	-	-	-
356	36	38	37	38	39	41	41	41	42	42	44	43	41	41	44	41	40	41	40
357	41	41	41	41	43	42	43	43	42	45	46	45	45	47	46	43	43	42	44
358	32	34	31	34	35	33	33	34	34	34	33	-	-	-	-	-	-	-	-
359	31	36	32	33	33	35	35	32	34	36	35	35	38	37	36	37	38	37	39
360	31	31	29	33	30	31	32	31	-	-	-	-	-	-	-	-	-	*	-
361	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
362	38	36	38	40	40	37	42	45	40	45	45	44	50	51	47	43	40	42	-
363	36	39	38	40	40	41	44	44	46	46	45	46	46	47	47	-	-	-	-
364	35	37	36	38	37	38	38	40	39	40	39	39	41	40	40	41	38	41	39
365	31	32	32	33	32	32	32	31	32	33	34	34	34	36	36	34	35	35	-
366	31	31	32	32	33	33	34	33	35	36	36	35	37	37	39	38	37	37	38
367	49	50	49	47	46	50	52	51	53	54	53	51	49	51	51	47	-	-	-
368	27	28	28	28	28	28	30	28	29	30	31	30	31	33	33	32	32	36	38
369	37	38	40	39	42	41	44	44	45	46	47	47	46	48	-	-	-	-	-
370	33	34	35	36	35	35	37	37	37	-	-	-	-	-	-	-	-	-	-
371	36	36	34	35	38	38	38	39	40	38	38	39	41	43	40	38	39	41	-
372	43	45	44	45	45	46	47	47	48	47	47	48	48	49	-	-	-	-	-
373	33	32	31	32	31	31	32	30	33	32	32	32	27	-	-	-	-	-	-
374	40	42	40	42	40	42	42	43	44	46	43	43	42	44	46	44	41	41	41
375	35	36	34	35	36	36	38	37	38	36	38	38	37	38	39	38	-	-	-

- = Animal dead

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 49: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																	
	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
376	22	23	24	26	26	27	28	28	27	28	30	29	30	31	32	32	34	37	37	39
377	22	23	25	26	26	27	27	27	28	28	28	28	29	29	30	31	31	31	31	32
378	22	23	24	25	26	27	26	26	28	29	29	28	29	29	29	30	28	31	30	30
379	21	21	21	22	23	23	24	24	25	25	26	26	25	26	26	27	28	30	31	31
380	21	22	25	25	27	27	27	27	28	28	29	28	28	29	29	30	30	30	30	31
381	24	24	27	29	31	32	33	33	34	37	38	39	38	39	42	45	48	50	54	52
382	19	20	23	24	25	25	26	25	26	27	27	28	28	28	28	29	30	31	35	35
383	20	19	21	23	24	25	25	24	26	26	26	27	30	29	28	29	30	29	30	31
384	21	22	23	24	26	26	26	27	26	27	29	29	29	31	30	30	32	36	36	39
385	20	21	22	24	26	26	28	30	28	28	29	29	30	31	31	31	32	33	34	34
386	19	18	21	22	23	24	25	25	25	25	26	26	26	28	26	27	28	31	32	34
387	22	22	23	26	27	28	29	29	29	29	31	32	31	34	33	33	34	37	36	36
388	22	22	23	24	24	25	26	25	26	27	27	30	27	29	30	30	30	30	34	32
389	19	20	22	23	24	24	24	24	25	27	27	27	27	28	27	30	29	31	31	31
390	17	18	21	22	22	23	22	23	25	24	24	25	24	25	25	25	25	27	28	30
391	19	19	21	22	24	24	25	24	24	24	25	25	25	26	26	26	27	27	32	29
392	26	26	27	29	32	33	33	36	38	37	38	38	39	41	40	43	44	46	51	48
393	23	23	25	27	28	28	29	29	29	30	31	31	32	32	32	33	36	36	38	39
394	23	23	25	27	28	29	30	31	30	30	31	31	31	32	32	33	34	37	36	37
395	21	23	23	24	25	27	26	28	28	28	28	29	28	31	29	30	33	34	32	35
396	23	23	25	27	28	28	29	30	30	30	30	31	31	33	33	34	35	37	36	37
397	23	25	26	26	26	28	29	30	34	30	31	32	33	32	32	33	32	34	34	34
398	24	24	26	27	29	29	31	30	28	28	31	31	31	31	31	32	32	32	32	32
399	23	24	25	27	29	29	32	32	31	32	33	34	36	35	35	36	35	38	38	38
400	21	20	20	20	23	23	24	23	24	26	27	26	26	27	27	27	27	28	28	28

APPENDIX 7 (continued)

## Individual Body Weights (g): Males and Females

Group 49: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104
376	42	45	38	41	41	41	43	40	44	45	44	45	46	46	47	45	44	43	44
377	32	31	30	33	32	32	32	31	34	33	38	39	-	-	-	-	-	-	-
378	32	32	30	33	34	32	34	34	34	35	36	42	-	-	-	-	-	-	-
379	33	34	31	33	35	35	36	35	36	39	39	40	38	39	40	38	37	36	-
380	31	32	31	31	32	32	32	33	33	35	36	36	38	37	42	-	-	-	-
381	51	49	50	53	55	56	54	57	61	59	58	60	61	61	59	54	55	52	49
382	38	40	37	38	39	40	41	39	42	41	42	43	45	43	44	43	45	42	40
383	34	37	35	36	38	38	37	37	37	38	39	39	38	-	-	-	-	-	-
384	37	37	36	35	34	35	35	36	36	37	37	39	37	37	36	39	40	38	37
385	34	37	35	36	39	37	38	38	39	41	-	-	-	-	-	-	-	-	-
386	36	36	36	40	40	39	39	40	41	40	40	42	42	41	42	40	39	39	41
387	36	36	35	35	35	34	34	33	33	34	34	35	35	35	36	39	-	-	-
388	33	34	32	33	33	33	32	33	31	34	34	32	33	31	32	30	29	30	29
389	32	29	29	31	31	31	32	32	32	37	33	32	32	33	32	31	31	35	34
390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
391	31	31	31	33	31	31	32	32	32	32	33	35	34	36	37	35	35	36	36
392	50	50	49	49	47	46	45	46	46	47	-	-	-	-	-	-	-	-	-
393	39	39	36	39	39	39	39	39	41	41	40	41	40	40	38	38	-	-	-
394	39	40	38	40	40	40	40	39	40	41	41	43	39	41	40	42	39	41	40
395	35	37	33	34	35	36	37	36	36	37	40	39	38	40	40	39	39	36	39
396	38	38	36	38	38	37	38	37	38	39	39	39	39	40	40	38	39	39	41
397	36	39	37	38	37	38	40	37	39	41	40	39	37	39	38	-	-	-	-
398	32	33	31	33	34	33	33	34	33	34	34	34	33	33	33	31	32	32	30
399	38	38	39	40	40	39	40	41	41	46	-	-	-	-	-	-	-	-	-
400	29	29	28	30	29	29	30	29	29	29	30	30	29	29	28	29	29	31	31

- = Animal dead

APPENDIX 8

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Individual Food Consumption (g): Males and Females**

Group 1<sup>a</sup>: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
1	62	57	42	59	49	57	49	36	51	50	56	54	54	50	50	57	57	46	47
2	59	64	50	73	57	59	43	56	66	51	55	53	51	50	49	41	43	45	43
3	48	36	42	54	53	56	43	46	54	56	54	48	54	46	47	33	35	32	33
4	54	68	46	49	67	58	37	44	50	48	53	45	50	51	48	47	55	41	34
5	50	53	43	53	59	51	46	47	45	45	41	50	39	38	40	33	35	40	32
6	46	48	34	50	49	44	48	49	46	49	53	50	49	49	42	38	41	40	36
7	44	41	34	48	49	43	38	42	42	39	37	34	32	35	34	31	31	35	30
8	53	53	49	53	55	52	46	51	59	51	50	56	55	48	49	43	53	34	35
9	51	55	39	44	54	52	32	59	33	49	48	46	50	35	44	35	48	56	38
10	48	56	45	54	54	49	40	47	53	54	48	45	42	36	31	30	23	-	-
11	45	40	46	46	59	56	37	55	49	60	52	55	48	47	48	52	48	32	30
12	47	52	48	56	53	56	52	57	56	46	55	42	40	36	35	33	30	34	31
13	57	62	35	50	61	50	41	49	47	44	45	41	42	44	42	39	35	41	33
14	65	50	40	50	52	55	49	51	49	51	46	49	48	49	45	43	44	43	45
15	67	60	42	57	53	58	54	52	59	57	54	49	48	49	52	45	47	47	51
16	43	54	42	64	48	60	49	55	59	53	50	50	54	55	54	44	45	56	59
17	62	65	41	57	50	56	41	54	54	54	66	50	44	52	47	48	41	42	38
18	52	56	46	50	53	49	40	39	48	50	48	40	44	54	52	55	49	56	50
19	57	62	41	56	50	55	44	42	59	55	53	55	59	54	52	48	52	65	50
20	61	59	44	57	45	58	45	66	59	51	62	50	56	53	52	53	52	47	40
21	44	57	45	66	67	54	49	42	63	57	48	46	43	46	45	51	40	37	36
22	51	44	37	43	47	44	44	43	47	43	44	43	40	41	38	39	35	35	31
23	68	73	34	59	68	55	48	55	61	63	57	42	50	50	49	50	37	50	48
24	a	44	37	45	53	52	41	37	48	49	51	43	48	44	39	33	38	36	35
25	54	50	47	54	45	43	45	47	44	44	42	61	39	44	40	37	35	45	35

- = Animal dead

a = Food consumption not reported due to technical error

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 1σ: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		c104
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	
1	47	48	39	47	50	42	55	40	50	52	53	46	49	53	53	52	52	55	a
2	42	44	46	49	45	47	49	47	46	45	47	37	-	-	-	-	-	-	-
3	35	40	39	44	42	40	50	39	44	46	46	41	43	58	47	58	37	33	-
4	37	43	47	43	50	42	55	47	41	53	50	40	38	50	50	27	-	-	-
5	33	34	36	40	39	40	57	-	-	-	-	-	-	-	-	-	-	-	-
6	38	39	38	37	43	41	45	41	38	42	48	-	-	-	-	-	-	-	-
7	34	33	38	36	36	36	39	40	38	38	39	37	36	30	36	35	38	37	34
8	37	35	40	41	41	40	41	39	43	-	-	-	-	-	-	-	-	-	-
9	37	53	50	44	46	42	47	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	33	41	36	38	46	44	47	44	43	46	49	37	41	56	49	47	41	33	35
12	30	32	32	38	36	36	39	39	35	35	40	35	30	31	34	a	35	-	-
13	32	32	35	40	40	37	40	42	38	38	39	37	33	34	24	-	-	-	-
14	43	47	47	46	48	40	49	54	47	48	46	48	48	52	54	52	49	53	33
15	45	50	49	57	51	47	53	50	50	49	48	48	47	53	46	49	50	47	37
16	47	48	45	53	51	49	51	47	49	57	50	52	51	52	52	48	52	44	34
17	38	39	44	42	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	50	51	43	47	44	46	45	41	41	41	36	44	41	62	54	54	39	34	38
19	55	52	41	47	46	43	49	42	43	48	42	50	45	47	46	51	43	41	39
20	47	50	42	48	44	44	44	45	41	-	-	-	-	-	-	-	-	-	-
21	37	36	37	36	55	57	49	55	46	49	49	49	49	45	52	54	37	36	47
22	34	34	36	40	41	45	46	45	43	50	43	45	36	50	55	50	41	43	45
23	37	37	38	39	42	41	44	43	43	42	45	40	40	40	41	41	40	44	38
24	38	35	38	40	43	29	-	-	-	-	-	-	-	-	-	-	-	-	-
25	32	36	36	40	37	36	40	40	42	39	39	40	36	39	37	37	40	50	33

- = Animal dead

a = Food consumption not recorded due to technical error

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 1σ: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
26	47	47	37	47	48	47	46	47	41	49	50	48	48	47	47	44	40	52	38
27	61	67	44	60	62	53	47	61	62	59	59	57	58	55	58	48	43	53	39
28	44	61	54	70	48	55	58	58	57	61	70	61	65	61	61	56	50	62	50
29	46	45	40	48	46	45	52	45	47	48	47	44	43	44	44	37	43	52	43
30	51	59	49	53	60	54	47	51	49	52	53	44	49	45	40	34	43	50	39
31	54	52	44	54	51	44	44	57	54	53	53	55	52	41	47	35	33	37	34
32	48	46	39	47	44	49	48	42	42	43	40	40	41	40	41	37	34	38	29
33	50	53	45	53	54	59	44	52	49	42	44	40	39	37	42	33	33	42	33
34	55	51	49	53	61	58	53	51	58	62	64	57	57	48	58	62	49	66	37
35	64	43	42	49	48	56	49	51	52	47	56	47	58	48	49	47	38	51	36
36	49	49	42	51	49	50	48	50	49	48	48	50	51	46	44	37	41	57	36
37	44	46	35	42	41	45	49	41	42	41	46	42	39	38	37	37	35	41	34
38	49	55	43	54	45	60	54	51	59	52	50	50	48	47	50	47	42	44	40
39	51	46	32	41	38	40	43	42	39	39	40	39	42	39	43	35	39	38	33
40	57	43	38	50	49	55	47	47	48	46	46	48	47	44	47	40	39	37	40
41	39	55	46	61	44	65	50	53	54	48	53	52	47	45	47	44	38	42	36
42	49	41	55	68	42	52	46	39	49	46	49	32	38	37	39	29	31	31	27
43	49	45	46	59	47	56	46	55	50	41	50	46	45	48	44	39	43	42	38
44	50	43	43	59	55	54	53	45	61	46	58	43	47	40	39	47	45	49	34
45	58	55	48	61	45	38	54	48	48	45	44	45	47	40	35	30	30	32	33
46	43	38	28	39	39	32	36	34	36	34	33	30	32	31	30	23	29	29	28
47	51	49	43	56	45	56	48	55	56	55	54	54	56	58	54	48	46	46	45
48	59	58	45	50	53	55	45	42	51	48	43	43	45	50	42	30	34	32	37
49	56	59	47	57	57	49	47	55	58	53	56	55	52	50	48	52	47	52	40
50	47	60	42	63	59	51	58	57	58	55	62	56	58	52	48	63	58	47	42

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 1σ: 0 mg Glyphosate·kg<sup>-1</sup>·day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
26	41	38	42	45	47	44	50	47	45	44	47	48	40	37	42	42	44	49	34
27	41	40	42	45	48	47	49	49	47	-	-	-	-	-	-	-	-	-	-
28	50	51	55	54	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	54	42	49	53	47	40	45	45	44	48	46	47	50	43	47	41	42	33	40
31	28	28	35	31	37	34	38	38	-	-	-	-	-	-	-	-	-	-	-
32	31	34	33	35	35	37	37	39	37	34	40	33	35	34	37	33	36	37	30
33	32	33	37	39	36	40	43	44	38	39	42	40	38	36	38	39	39	47	34
34	39	39	41	43	44	46	46	52	48	49	44	48	48	54	55	58	51	39	43
35	40	39	40	42	39	40	48	45	46	48	-	-	-	-	-	-	-	-	-
36	35	35	39	44	43	42	50	50	44	40	37	40	34	-	-	-	-	-	-
37	34	35	38	39	39	39	43	44	40	39	42	40	36	37	36	37	40	40	36
38	40	41	48	45	44	41	51	49	46	46	49	46	44	42	48	45	42	47	32
39	33	33	38	39	37	36	42	37	32	33	39	30	20	-	-	-	-	-	-
40	37	36	42	43	45	40	51	48	43	-	-	-	-	-	-	-	-	-	-
41	34	33	39	38	42	38	42	44	40	44	61	40	41	39	44	39	43	44	35
42	28	27	29	34	34	32	34	39	34	53	46	36	31	32	31	34	35	38	34
43	36	38	40	45	44	39	49	45	43	45	46	45	38	31	30	34	37	-	-
44	35	34	38	47	44	44	47	47	46	42	42	44	44	42	48	44	45	45	39
45	32	32	33	38	54	32	39	36	39	36	41	32	32	32	45	38	a	39	25
46	25	25	29	32	32	28	34	39	37	50	45	37	-	-	-	-	-	-	-
47	a	43	46	49	49	40	53	54	50	47	49	50	41	43	48	52	-	-	-
48	44	32	36	40	36	36	46	44	36	45	46	40	38	43	45	37	37	40	37
49	47	41	47	47	49	51	53	42	51	52	41	51	51	49	58	47	44	35	43
50	56	53	48	49	50	53	51	59	50	51	45	44	53	56	50	51	37	38	53

- = Animal dead

a = Food consumption not recorded due to technical error

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 2♂: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
51	65	58	41	56	49	52	48	51	59	58	58	55	50	54	70	44	49	48	43
52	62	56	41	53	58	51	46	53	49	51	52	48	46	51	54	50	42	45	45
53	47	46	35	37	49	38	38	42	43	40	39	40	39	40	38	35	36	36	34
54	51	61	47	48	69	48	52	60	58	53	54	41	51	49	46	36	37	37	34
55	40	43	37	50	54	48	44	45	47	41	36	37	40	37	35	32	31	43	33
56	68	65	47	52	57	46	43	50	47	51	45	43	43	33	32	29	32	34	29
57	41	39	38	46	54	47	40	44	44	53	39	37	36	38	34	30	32	56	44
58	48	44	36	45	49	37	38	45	41	39	39	37	33	37	33	31	37	37	30
59	49	41	47	55	63	51	53	44	55	51	55	56	50	50	44	32	31	43	32
60	58	61	53	65	51	58	47	52	58	47	52	50	41	41	42	45	42	42	34
61	62	60	44	55	64	46	50	49	52	55	57	46	50	40	49	31	34	52	27
62	45	66	46	54	58	55	58	51	52	49	48	45	42	46	40	33	34	37	32
63	59	60	47	60	63	57	57	58	60	61	59	56	57	53	55	49	43	50	35
64	60	61	49	57	60	49	52	46	52	47	51	51	46	50	45	42	50	42	38
65	53	56	45	56	53	57	59	58	54	49	55	47	49	53	49	50	45	48	45
66	60	55	41	55	51	53	49	44	40	59	53	51	41	46	39	47	47	41	34
67	50	54	40	52	56	50	46	47	49	44	53	47	47	55	48	42	41	39	38
68	63	57	46	63	44	56	54	51	60	58	51	47	48	49	53	37	39	36	42
69	47	50	40	55	44	47	47	52	50	51	50	40	39	39	36	31	36	32	31
70	51	55	43	51	48	50	49	51	49	51	46	49	40	50	43	37	35	35	30
71	52	60	43	49	53	57	50	53	52	47	50	50	47	58	42	46	43	38	40
72	51	55	41	49	57	54	45	51	53	47	56	48	41	44	41	38	41	40	36
73	66	60	42	59	53	57	51	43	59	59	57	46	49	44	46	45	-	-	-
74	56	55	46	53	64	53	53	59	52	50	54	48	48	48	50	39	40	50	39
75	49	51	46	66	59	58	61	58	54	55	49	54	49	55	46	39	43	39	36

- = Animal dead

b = food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 2♂: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
51	44	45	48	46	50	52	61	52	50	50	53	52	52	51	56	44	40	30	33
52	47	48	45	46	51	47	52	48	46	51	47	51	46	-	-	-	-	-	-
53	35	37	40	37	37	42	43	47	52	41	46	46	-	-	-	-	-	-	-
54	34	38	36	37	38	39	39	39	25	-	-	-	-	-	-	-	-	-	-
55	34	41	39	36	47	33	-	-	-	-	-	-	-	-	-	-	-	-	-
56	30	32	35	34	36	47	40	52	45	38	43	50	39	51	46	41	42	32	35
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	29	29	31	35	33	32	35	34	34	34	34	28	27	29	29	36	30	34	33
59	32	33	38	37	40	40	38	40	37	39	39	38	37	39	38	35	37	40	30
60	35	37	40	39	41	43	45	33	48	51	47	45	47	45	47	41	44	43	36
61	43	38	42	47	44	45	51	44	41	50	45	41	48	59	56	52	44	21	29
62	36	35	41	42	43	21	47	45	41	41	44	37	39	42	50	37	38	-	-
63	39	34	37	43	41	41	45	45	40	39	43	37	40	34	39	37	42	42	33
64	37	43	41	47	46	47	51	47	44	49	47	45	44	42	45	41	-	-	-
65	40	42	44	46	48	49	51	45	44	47	48	46	39	45	52	44	47	42	43
66	19	28	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	43	41	40	43	45	55	50	47	45	48	46	45	44	53	44	47	50	44	40
68	43	39	40	37	42	43	47	43	42	46	44	46	44	42	42	38	43	44	34
69	27	33	36	41	39	36	43	40	31	46	38	38	44	33	40	37	40	44	33
70	32	33	39	40	43	39	39	43	40	42	40	36	43	34	38	39	33	-	-
71	42	41	45	44	49	48	51	53	51	50	45	53	51	46	60	50	49	48	40
72	34	39	40	42	43	42	45	43	46	48	43	46	39	39	42	42	41	-	-
73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74	41	44	45	48	50	46	52	51	49	50	49	47	50	44	47	43	35	28	-
75	58	55	49	44	45	51	47	-	-	-	-	-	-	-	-	-	-	-	-

- = Animal dead

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 2d: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
76	71	40	41	49	54	55	50	52	52	55	52	54	46	49	41	48	53	52	44
77	57	56	40	49	51	49	47	44	43	45	44	42	42	47	40	41	39	45	37
78	42	50	47	53	55	46	52	47	48	45	48	45	43	48	46	36	37	49	30
79	46	50	36	39	42	44	47	46	46	46	41	46	40	47	41	37	38	42	36
80	48	47	48	50	48	57	55	47	55	47	42	44	42	42	47	34	35	41	35
81	58	58	39	55	46	48	59	42	61	60	62	49	48	47	48	36	39	57	36
82	57	55	45	53	51	60	57	47	53	54	58	49	52	48	54	39	44	54	36
83	47	51	41	51	51	59	54	50	52	55	52	50	53	49	49	48	50	66	46
84	54	58	45	69	58	58	67	51	67	58	62	60	57	63	55	57	48	60	42
85	45	63	50	46	49	49	55	49	55	53	53	49	45	49	46	40	41	57	39
86	56	52	42	47	46	53	54	47	51	50	47	46	43	44	39	36	40	45	39
87	52	52	45	55	48	45	52	52	47	51	52	46	45	42	38	39	38	49	36
88	54	51	51	48	49	47	56	52	58	52	53	50	53	51	52	50	46	47	42
89	46	45	38	45	49	59	59	45	51	65	58	58	52	50	46	40	55	52	41
90	53	51	42	62	48	55	62	37	58	54	60	53	50	52	50	39	42	36	37
91	55	58	45	55	51	46	48	42	46	48	48	43	49	42	44	37	38	36	38
92	71	55	50	59	60	53	52	58	46	49	52	49	51	41	46	35	49	41	45
93	55	54	41	51	56	40	55	43	39	41	35	36	36	41	48	39	30	52	28
94	61	55	38	48	47	52	54	45	53	51	38	39	42	43	41	35	35	37	33
95	51	57	41	62	51	56	53	61	56	41	50	50	53	51	45	39	39	50	44
96	58	54	40	59	56	62	59	54	56	60	59	51	57	52	45	52	44	50	41
97	47	46	35	45	45	63	43	50	52	44	50	53	47	45	43	39	38	48	34
98	49	48	37	44	46	49	43	41	41	40	39	37	38	35	35	31	35	30	31
99	52	44	46	52	50	56	41	51	36	52	44	49	50	44	45	55	38	41	32
100	55	50	38	45	48	49	50	46	50	49	46	43	48	44	44	39	38	40	35

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 2♂: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
76	37	34	40	38	43	42	46	46	45	50	46	44	39	48	50	42	49	29	37
77	38	35	42	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
78	35	33	45	44	42	46	46	42	42	44	50	42	45	49	46	44	39	42	
79	37	38	38	43	44	43	41	44	41	39	-	-	-	-	-	-	-	-	
80	37	38	37	39	43	42	44	43	-	-	-	-	-	-	-	-	-	-	
81	33	33	49	37	38	47	40	48	36	37	44	47	43	45	50	48	51	41	
82	39	39	41	42	35	46	46	47	43	47	44	42	41	40	40	36	-	-	
83	48	46	49	50	55	51	55	53	52	53	52	44	-	-	-	-	-	-	
84	48	43	45	47	49	49	48	45	48	46	49	40	41	52	44	44	47	39	
85	39	42	39	45	45	50	50	47	44	46	46	48	55	53	46	35	39	49	
86	32	36	37	42	43	43	44	44	40	43	44	42	40	42	42	32	-	-	
87	33	35	37	43	41	45	45	45	41	45	43	39	44	41	48	37	42	44	
88	40	39	43	45	46	44	52	44	49	47	49	47	47	46	56	40	39	48	
89	40	41	58	52	51	56	51	-	-	-	-	-	-	-	-	-	-	-	
90	36	36	37	38	39	38	43	43	37	37	40	36	35	34	37	38	39	40	
91	36	33	37	38	39	42	47	43	42	41	41	40	42	40	40	41	42	44	
92	37	36	60	50	49	47	52	45	48	47	42	46	48	45	48	-	-	-	
93	33	29	29	34	33	41	42	38	44	42	49	44	41	51	46	-	-	-	
94	34	30	35	36	32	38	40	38	33	35	41	34	34	33	35	34	37	40	
95	39	39	43	44	47	49	51	49	42	50	45	50	48	49	-	-	-	-	
96	48	44	42	43	49	44	51	51	48	52	43	44	45	43	50	53	49	52	
97	49	44	39	47	42	47	48	48	47	49	44	48	40	42	51	38	30	-	
98	27	28	35	38	41	36	41	41	44	42	41	37	39	36	40	39	39	43	
99	35	37	39	43	44	44	52	46	39	45	43	46	41	43	52	43	35	41	
100	34	34	39	40	42	45	45	45	43	42	40	40	37	40	42	40	44	40	

- = Animal dead

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 3 $\sigma$ : 300 mg Glyphosate.kg $^{-1}$ .day $^{-1}$ 

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
101	53	61	39	58	59	51	53	51	57	58	53	55	48	52	48	40	36	34	38
102	47	64	45	47	53	50	34	47	46	48	50	46	44	47	51	39	37	36	41
103	50	56	39	49	54	56	35	50	51	53	57	51	53	51	50	40	37	43	38
104	52	55	47	57	55	54	47	52	43	48	44	48	38	38	36	32	30	35	29
105	57	58	58	50	46	55	51	52	54	52	45	45	48	48	50	35	35	33	30
106	51	51	41	44	52	46	49	43	44	43	44	44	39	40	40	33	37	44	34
107	60	56	39	49	57	60	49	48	46	44	43	43	37	38	35	29	38	37	32
108	54	61	48	55	55	46	52	52	59	53	53	48	47	48	48	36	42	42	38
109	45	41	43	59	51	47	54	54	52	57	58	47	44	37	34	33	35	45	32
110	47	45	38	47	55	51	43	41	47	46	43	43	40	42	40	38	43	41	35
111	43	47	41	43	56	47	51	48	49	49	50	51	46	46	44	40	40	56	32
112	58	68	48	59	50	60	60	50	65	36	63	50	48	47	48	37	34	45	32
113	54	57	43	42	48	43	37	36	40	37	34	34	30	36	31	40	30	39	29
114	57	60	46	58	48	49	56	51	56	51	53	54	46	50	41	48	47	46	50
115	58	59	49	66	63	58	58	57	63	57	59	47	57	55	51	42	51	40	39
116	51	49	44	54	64	59	52	55	53	51	54	51	48	50	44	50	42	41	39
117	46	52	44	54	47	58	51	52	52	55	49	54	52	45	43	37	43	42	34
118	52	57	54	52	59	63	51	50	48	55	59	64	55	53	48	50	53	35	36
119	52	52	43	48	41	43	41	48	39	59	42	40	39	42	37	31	36	35	39
120	62	72	52	58	65	49	50	54	55	62	68	65	59	58	59	51	51	50	43
121	53	57	41	58	59	46	57	44	66	59	49	48	38	42	36	34	36	39	32
122	64	57	45	50	53	45	37	45	39	41	42	41	37	39	40	32	35	37	31
123	46	53	45	64	55	52	53	43	48	53	53	46	44	43	36	34	38	33	36
124	48	58	50	53	55	58	48	43	54	49	47	45	46	50	42	37	36	41	39
125	57	56	43	59	56	54	51	44	54	60	63	44	56	53	50	52	53	51	37

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 3♂: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
101	38	38	39	42	49	41	52	45	45	44	49	47	46	46	45	53	54	54	42
102	49	47	39	48	52	45	50	44	44	50	48	45	43	52	46	44	53	38	47
103	37	41	42	41	44	45	45	42	41	48	44	44	42	42	38	40	51	41	31
104	30	31	32	36	39	36	40	40	35	40	37	41	42	33	34	-	-	-	-
105	31	32	31	33	37	35	38	38	34	40	35	42	-	-	-	-	-	-	-
106	34	35	39	39	42	43	44	42	41	49	42	44	43	44	44	46	46	50	29
107	35	33	38	36	42	34	39	47	41	40	39	41	48	36	43	36	38	44	40
108	34	35	33	38	47	46	47	43	40	49	46	48	35	-	-	-	-	-	-
109	32	31	35	37	37	37	42	44	39	40	41	38	35	32	40	35	41	40	-
110	35	36	38	40	41	39	45	45	41	42	42	41	39	38	40	36	41	41	-
111	35	36	40	40	48	41	46	50	46	52	46	50	46	50	47	52	47	39	40
112	32	54	35	34	42	38	39	42	40	40	41	42	46	49	54	48	63	43	29
113	28	31	30	34	38	33	36	37	35	33	39	33	31	30	31	31	34	38	29
114	35	42	51	47	52	45	53	45	49	47	46	54	46	53	45	50	52	36	39
115	41	43	48	42	47	43	46	44	42	42	43	48	48	45	42	42	44	46	35
116	40	43	44	46	51	55	55	53	49	52	47	55	55	56	62	50	52	45	40
117	37	37	42	41	45	42	46	43	43	49	46	47	46	46	46	44	47	46	37
118	34	36	38	39	41	45	52	40	42	53	41	45	52	51	50	54	39	31	41
119	29	32	38	38	45	43	45	41	-	-	-	-	-	-	-	-	-	-	-
120	44	46	43	46	49	39	49	46	47	44	45	45	47	46	46	46	53	56	50
121	29	33	37	37	37	38	41	40	41	40	40	39	34	35	37	37	39	45	34
122	31	31	34	38	43	42	40	42	44	41	48	36	38	38	39	41	40	41	36
123	29	28	35	35	38	34	37	39	35	38	41	42	38	42	53	-	-	-	-
124	36	32	40	43	46	40	45	44	40	41	41	41	40	40	36	40	40	43	37
125	32	34	39	36	42	41	31	-	-	-	-	-	-	-	-	-	-	-	-

- = Animal dead

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 3<sup>a</sup>: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
126	49	53	43	53	54	48	51	41	50	56	59	59	52	53	49	50	57	54	49
127	58	44	46	63	63	53	55	55	58	62	62	61	56	55	58	49	57	58	51
128	50	53	49	53	57	54	54	53	50	49	51	51	48	46	51	45	43	51	39
129	46	41	34	42	40	44	38	36	37	35	35	41	36	36	34	32	33	43	31
130	50	46	42	47	43	47	47	42	44	46	40	37	42	40	40	35	36	43	32
131	64	55	48	60	55	51	60	42	62	36	61	50	58	58	51	50	49	57	45
132	60	62	47	45	47	42	48	43	43	44	43	41	40	42	44	37	38	31	35
133	52	48	41	41	40	44	43	40	42	43	38	38	43	36	39	35	34	49	34
134	52	57	37	51	52	44	47	45	41	42	38	36	38	36	34	33	31	53	28
135	56	53	49	59	57	56	54	42	54	47	56	44	51	52	46	45	43	56	52
136	49	53	42	45	44	45	45	42	41	43	38	39	40	38	35	34	40	42	35
137	60	63	47	60	61	47	62	40	52	52	58	60	54	56	53	58	44	66	36
138	63	64	45	59	59	49	73	51	57	59	61	40	50	40	40	34	38	34	37
139	47	49	49	48	51	48	52	53	51	52	48	48	66	46	50	49	49	37	39
140	50	52	43	61	60	50	46	45	57	58	56	50	53	54	49	45	45	49	43
141	47	43	46	57	52	50	60	50	52	52	51	53	55	40	47	41	45	49	40
142	55	56	49	58	55	50	54	40	56	49	40	40	44	52	46	40	39	41	35
143	43	44	42	53	59	53	52	49	45	52	51	44	51	49	38	27	38	35	35
144	46	45	39	51	59	50	48	40	46	47	43	39	39	48	40	26	35	38	35
145	52	50	45	61	61	46	55	46	52	53	55	57	51	53	47	47	43	46	48
146	53	54	51	56	55	50	58	52	58	60	59	51	52	52	49	45	47	53	40
147	57	62	50	51	61	59	49	47	52	44	55	57	59	52	54	40	55	47	48
148	63	59	43	54	53	51	49	55	47	56	53	53	52	48	45	35	38	50	35
149	46	48	39	46	43	44	48	44	47	50	44	44	43	42	43	39	43	40	37
150	44	63	42	50	49	44	52	41	49	43	53	50	52	52	50	48	48	42	38

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 4d: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
151	61	59	41	51	40	48	59	40	41	42	53	45	54	45	47	51	43	52	50
152	62	54	34	52	59	56	53	36	47	52	51	45	47	52	47	44	45	46	47
153	57	58	45	56	49	49	46	28	48	52	47	50	41	48	39	35	44	43	33
154	62	70	58	56	52	59	57	52	61	59	57	51	53	55	54	42	49	43	44
155	59	59	45	47	57	46	51	43	46	52	59	47	52	51	46	50	38	50	-
156	51	53	42	50	46	49	45	41	56	44	44	41	45	49	43	33	35	34	31
157	58	49	42	43	49	49	49	43	39	45	37	42	38	38	38	32	37	39	33
158	49	67	53	54	49	46	56	44	55	52	54	45	52	48	45	40	43	41	40
159	49	51	45	45	48	47	53	52	52	48	51	50	49	45	43	36	36	38	37
160	55	45	43	53	47	47	47	50	50	42	46	41	45	45	40	37	37	33	36
161	55	58	49	59	49	53	54	49	51	57	55	51	52	21	47	38	40	43	32
162	48	60	49	47	45	50	53	40	49	49	48	45	46	43	40	41	36	49	36
163	52	71	42	53	50	53	53	47	49	60	49	49	43	43	48	41	38	37	-
164	62	59	53	52	60	61	59	52	57	51	51	54	57	54	54	55	52	53	50
165	52	51	43	51	56	51	53	53	58	49	55	47	48	57	47	50	45	51	44
166	58	54	48	59	61	47	44	51	54	57	54	50	47	47	46	45	53	53	47
167	32	59	34	55	48	44	55	46	47	45	46	44	42	53	49	41	40	46	43
168	48	61	38	53	60	49	55	41	55	49	54	48	46	38	49	40	39	39	41
169	49	53	43	57	53	48	57	57	51	47	53	47	41	45	40	38	43	42	41
170	62	58	43	54	55	52	56	42	45	42	47	45	40	44	44	44	38	33	34
171	53	61	40	55	62	55	54	46	43	47	45	44	43	40	38	30	37	26	34
172	52	51	37	47	47	48	49	46	51	43	51	44	40	42	38	39	35	35	34
173	47	55	41	57	52	52	56	51	52	55	47	52	52	56	48	37	40	38	42
174	57	59	45	51	46	45	51	48	48	50	49	52	48	47	46	58	36	40	46
175	58	63	52	60	55	52	65	49	56	59	61	55	51	56	51	43	42	40	39

- = Animal dead

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 4d: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																			
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104	
151	45	47	45	39	51	45	56	42	47	43	39	46	47	57	49	40	43	35	33	
152	37	39	40	48	47	43	52	44	46	54	40	50	50	44	44	49	56	48	32	
153	32	38	39	38	41	39	41	44	42	45	42	42	41	-	-	-	-	-	-	
154	42	45	46	46	48	49	49	50	43	-	-	-	-	-	-	-	-	-	-	
155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
156	31	32	33	38	38	38	38	39	36	36	38	36	34	35	35	38	35	37	33	
157	36	37	37	41	44	46	48	50	52	42	47	47	43	48	54	42	38	43	39	
158	38	38	39	41	42	44	46	41	42	44	46	42	42	47	47	46	35	41	-	
159	34	37	38	42	40	39	40	38	43	-	-	-	-	-	-	-	-	-	-	
160	33	35	40	45	40	43	45	43	41	46	-	-	-	-	-	-	-	-	-	
161	34	36	40	40	41	42	43	43	42	41	43	40	41	36	40	37	43	38	-	
162	36	35	38	43	44	43	46	42	42	42	44	45	49	62	57	47	57	50	52	
163	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
164	44	52	43	53	54	48	31	50	47	39	28	-	-	-	-	-	-	-	-	
165	43	43	47	52	48	51	50	50	46	50	49	52	48	50	45	42	-	-	-	
166	50	47	48	50	47	50	51	48	47	54	45	44	46	48	50	45	54	44	40	
167	38	40	44	49	30	41	43	43	47	47	36	45	43	51	51	35	49	30	34	
168	34	34	42	43	41	41	43	47	44	48	48	46	49	50	59	31	-	-	-	
169	34	49	51	49	48	48	53	50	46	47	51	48	47	46	48	50	50	51	40	
170	31	35	36	48	42	40	41	42	40	43	40	39	38	40	38	41	45	46	34	
171	34	33	33	41	44	42	43	40	43	42	42	40	34	44	41	40	42	42	36	
172	37	32	41	46	41	38	41	39	39	41	-	-	-	-	-	-	-	-	-	
173	34	33	35	46	42	42	45	45	-	-	-	-	-	-	-	-	-	-	-	
174	40	40	38	41	47	41	49	54	-	-	-	-	-	-	-	-	-	-	-	
175	39	40	41	44	46	52	48	49	49	47	52	50	46	48	49	46	45	50	39	

- = Animal dead

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 4d: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
176	56	55	38	57	56	50	58	42	57	49	49	59	59	55	56	52	51	53	48
177	50	60	42	49	62	54	59	47	53	47	53	55	53	53	55	47	41	58	40
178	51	50	41	55	59	54	65	57	56	40	51	51	48	51	49	38	43	51	42
179	62	62	37	64	55	50	65	36	57	56	55	52	56	54	53	47	35	61	32
180	52	52	29	44	47	43	47	42	47	48	50	47	49	44	46	39	44	56	42
181	45	44	40	43	46	44	47	39	46	45	41	40	39	39	39	33	32	42	35
182	45	56	38	43	47	48	52	45	42	45	43	39	43	42	39	40	35	49	34
183	52	45	38	48	54	47	54	46	50	48	46	49	44	49	46	46	36	57	39
184	52	50	37	50	59	46	49	42	54	43	39	42	41	45	36	34	35	44	34
185	50	52	44	53	60	51	47	47	49	43	48	48	57	54	60	47	57	37	
186	45	52	43	49	56	48	53	44	45	48	42	47	41	40	40	30	35	47	35
187	51	51	43	52	54	43	49	47	49	44	48	52	48	44	44	38	45	48	31
188	50	48	41	49	50	50	56	43	54	42	41	46	39	40	38	33	35	34	33
189	60	28	38	44	40	37	37	38	35	35	34	33	35	36	33	-	-	-	-
190	60	57	43	54	57	53	60	52	51	55	52	58	50	52	49	40	43	44	40
191	44	45	37	55	43	45	47	51	52	50	51	48	50	47	40	36	49	39	34
192	49	45	48	41	45	41	45	45	43	44	42	40	42	43	39	33	43	40	60
193	44	41	49	54	38	43	37	44	44	47	49	40	36	42	29	39	28	51	29
194	45	48	43	48	52	44	52	47	57	43	53	54	46	52	47	48	39	50	38
195	46	52	42	45	43	45	45	42	47	43	42	44	47	47	41	35	43	37	41
196	49	48	49	42	35	40	45	36	42	40	35	36	44	41	37	29	31	28	29
197	54	56	44	60	51	52	51	52	53	63	64	54	52	56	49	58	56	56	53
198	56	69	42	57	81	49	52	51	63	54	58	58	58	53	49	47	56	38	34
199	46	43	29	43	47	42	46	50	48	48	41	40	38	44	33	32	34	35	31
200	50	48	41	54	54	54	50	53	52	50	48	45	44	45	43	42	42	40	

- = Animal dead

b = Food consumed measured over 6 day period

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 4♂: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																	
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100
176	46	40	45	52	52	53	52	54	52	54	51	52	51	54	60	52	53	50
177	40	41	44	46	45	49	50	48	48	53	41	46	51	54	56	50	52	50
178	39	48	47	49	53	50	55	53	53	54	50	48	48	56	-	-	-	-
179	40	50	45	38	48	46	44	47	50	41	43	39	44	40	37	37	-	-
180	40	42	42	42	42	45	51	43	43	41	48	-	-	-	-	-	-	-
181	34	31	39	39	40	39	39	40	34	38	37	37	33	39	37	41	45	35
182	29	35	45	40	42	43	41	43	39	41	42	43	49	52	50	46	45	38
183	41	41	39	46	46	47	52	50	47	54	54	55	48	53	58	43	34	-
184	37	33	50	42	47	47	41	43	43	41	42	43	39	41	42	38	43	36
185	56	44	40	46	36	43	50	35	48	47	40	37	48	62	43	46	54	30
186	33	37	41	45	44	43	47	48	46	49	47	46	48	47	52	45	46	48
187	39	40	38	42	44	45	46	46	45	44	44	46	43	43	45	40	44	35
188	37	33	37	45	41	41	43	45	42	43	43	40	-	-	-	-	-	-
189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
190	43	46	51	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-
191	33	33	39	43	42	41	50	45	43	48	40	49	44	45	45	49	37	40
192	46	34	39	42	40	45	46	45	42	42	45	44	41	39	42	43	43	47
193	28	37	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
194	37	36	42	40	46	44	46	46	44	46	46	45	40	48	43	41	43	46
195	52	71	60	d7	66	68	-	-	-	-	-	-	-	-	-	-	-	-
196	29	31	35	32	37	36	39	39	37	36	37	36	32	32	32	34	34	28
197	54	41	50	52	51	53	53	53	54	59	46	53	59	48	46	28	-	-
198	45	38	45	46	56	50	61	53	58	53	43	53	54	50	53	-	-	--
199	34	29	39	36	37	38	45	37	38	38	39	38	36	36	34	33	38	39
200	37	37	45	40	a	45	47	48	43	46	45	46	47	50	55	33	48	39

- = Animal dead

a = Food consumption not recorded due to technical error

c = Food consumed measured over 6 day period

d = Value from raw data noted as being low but still included in group means

CONFIDENTIAL  
 PROPRIETARY  
 ORIGIN  
 DATA

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 1♀: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
201	42	43	28	38	48	31	16	49	40	39	30	37	37	41	43	56	57	55	31
202	56	63	29	53	59	48	41	56	40	56	44	51	56	53	51	34	51	38	34
203	58	56	35	48	54	44	35	60	42	49	45	40	49	41	47	54	55	49	37
204	51	48	36	47	58	44	35	44	36	52	42	41	49	40	45	39	37	27	38
205	39	45	71	42	53	44	43	54	41	46	41	32	44	39	51	41	32	25	27
206	56	52	18	55	63	45	44	43	41	51	48	45	53	52	47	50	51	50	43
207	53	49	54	47	49	44	37	55	41	49	45	41	46	30	45	50	41	52	47
208	51	51	23	50	51	45	42	61	46	56	37	47	49	44	51	55	36	59	41
209	40	40	47	40	40	42	41	41	43	41	42	42	41	40	36	36	32	30	33
210	62	45	22	46	56	50	42	48	38	53	55	40	57	60	55	60	54	57	43
211	40	37	48	37	56	41	42	46	29	48	25	33	42	34	42	42	33	28	35
212	49	49	40	42	50	35	33	45	35	47	43	35	33	35	30	31	37	28	27
213	55	51	32	52	63	44	43	53	34	55	33	45	52	48	52	52	61	58	31
214	54	51	34	52	57	40	51	52	48	48	41	39	55	50	50	42	52	31	41
215	50	59	41	47	57	45	40	48	41	54	28	41	39	41	42	46	55	48	42
216	58	49	28	44	57	48	42	52	44	56	34	51	53	41	44	54	47	51	50
217	43	56	26	40	51	43	38	46	42	52	37	39	47	40	45	31	50	36	40
218	48	58	30	32	32	34	34	31	36	31	32	d9	27	30	18	28	40	25	27
219	57	55	49	40	55	45	39	45	42	43	36	32	36	37	12	33	32	28	27
220	44	57	42	43	47	43	47	49	36	51	43	46	50	51	43	39	39	48	45
221	62	52	47	53	66	38	39	52	46	59	52	51	55	55	58	49	-	-	-
222	49	61	36	50	51	47	39	52	56	51	28	56	47	40	41	43	51	36	37
223	51	49	37	38	49	42	41	49	39	45	41	45	36	45	44	31	34	27	26
224	50	53	39	51	53	43	42	47	39	50	29	33	30	33	28	27	31	31	28
225	53	57	32	46	53	45	43	50	45	58	42	44	52	56	49	58	44	54	34

- = Animal dead

b = Food consumed measured over 6 day period due to technical error

d = Value from raw data noted as being low but still included in group means

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 19: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
201	33	22	35	42	52	49	44	45	54	44	45	40	43	48	36	28	34	31	19
202	30	32	32	61	49	55	50	47	44	45	29	51	30	-	-	-	-	-	-
203	29	33	39	48	46	42	44	41	56	-	-	-	-	-	-	-	-	-	-
204	31	32	37	39	36	35	37	38	44	39	35	33	32	35	36	44	38	41	27
205	28	38	34	33	49	42	41	34	27	43	28	35	34	41	34	33	34	21	28
206	37	32	23	50	60	52	46	32	33	39	35	36	40	42	42	44	46	50	23
207	31	39	41	54	46	45	50	55	37	65	55	45	42	22	-	-	-	-	-
208	33	40	51	43	47	43	46	36	39	38	40	51	44	56	35	47	44	45	41
209	31	39	36	39	39	39	41	39	39	37	41	39	39	39	39	39	38	-	-
210	36	30	45	47	45	53	52	47	57	60	44	43	39	34	43	54	42	30	23
211	36	41	42	41	46	46	46	55	41	50	42	57	55	45	50	46	45	34	36
212	30	32	32	34	36	37	31	36	31	36	36	40	32	37	45	48	35	-	-
213	34	32	42	48	71	59	52	45	57	63	30	55	43	45	-	-	-	-	-
214	29	29	46	46	39	51	55	46	47	58	50	44	40	40	40	41	46	49	40
215	34	37	39	43	49	46	47	39	53	58	52	54	50	47	43	-	-	-	-
216	34	32	36	36	48	49	55	45	62	59	52	47	49	40	48	44	39	40	32
217	25	27	28	53	44	47	48	46	49	51	47	46	39	29	37	48	38	15	-
218	29	26	31	32	35	37	35	30	37	29	33	35	27	35	35	28	30	36	29
219	25	30	36	32	35	42	46	43	31	38	38	39	26	-	-	-	-	-	-
220	39	36	38	56	56	53	53	50	53	56	57	62	62	55	52	51	50	47	37
221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
222	48	41	49	40	40	42	53	50	51	53	54	54	49	41	47	26	-	-	-
223	28	d13	42	57	33	34	56	37	37	47	37	35	30	-	-	-	-	-	-
224	29	34	33	38	36	33	36	34	31	31	37	34	28	26	-	-	-	-	-
225	30	42	47	53	53	50	47	47	42	-	-	-	-	-	-	-	-	-	-

- = Animal dead

c = Food consumed measured over 6 day period

d = Value from raw data noted as being low but still included in group means

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 19: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
226	47	53	28	59	61	43	41	51	41	55	46	40	49	40	33	32	56	61	46
227	58	50	48	58	68	43	43	48	54	49	57	42	48	45	53	62	52	68	44
228	48	55	40	41	42	38	38	41	37	38	52	29	34	41	44	35	46	42	43
229	59	50	36	49	52	43	42	49	43	54	46	47	45	48	58	65	45	49	34
230	49	50	37	42	52	34	40	32	34	31	30	28	27	34	28	a	30	25	27
231	47	48	41	47	54	44	40	46	53	56	64	43	56	38	44	41	45	30	35
232	56	54	29	45	56	38	39	40	46	50	55	37	40	39	38	47	37	56	39
233	53	53	33	52	49	39	42	46	44	58	51	39	46	46	53	33	32	31	37
234	53	54	35	49	53	40	36	40	35	63	48	32	37	37	30	41	36	57	36
235	45	48	41	42	53	42	41	46	41	54	45	46	36	49	54	30	36	28	29
236	59	58	36	50	68	44	43	43	40	61	63	47	52	48	54	65	50	64	47
237	60	39	35	47	52	39	49	36	39	53	50	39	46	37	47	47	40	34	31
238	52	55	34	47	54	38	46	41	49	52	63	50	47	42	50	56	52	62	45
239	57	62	36	49	54	40	50	42	40	56	59	40	52	37	48	64	61	48	41
240	52	51	40	a	53	45	38	45	52	53	52	39	43	39	46	49	46	46	46
241	61	53	36	39	51	30	41	53	50	56	53	47	43	42	55	54	54	48	41
242	69	65	37	54	55	37	39	49	49	53	55	44	46	40	45	48	52	46	48
243	66	63	43	56	65	52	45	51	37	56	57	50	63	51	48	35	33	24	33
244	49	31	36	48	44	44	42	43	42	50	54	49	36	22	35	31	35	44	30
245	65	49	40	56	62	42	42	48	56	57	49	55	44	48	60	51	50	62	43
246	64	49	43	49	58	48	42	37	49	58	46	49	43	33	45	39	39	61	31
247	43	37	31	35	31	33	30	27	31	31	32	30	32	18	28	30	30	31	23
248	46	56	39	50	-	-	+	-	-	-	-	-	*	+	-	-	-	-	-
249	55	50	47	55	55	67	40	56	48	54	54	54	55	59	51	54	49	36	48
250	58	47	42	50	53	39	49	41	54	58	53	38	44	49	43	37	42	36	36

- = Animal dead

a = Food consumed not measured due to technical error

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 19: 0 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
226	37	35	33	46	49	51	35	54	53	54	46	-	-	-	-	-	-	-	
227	36	31	48	53	60	49	48	44	68	59	43	-	-	-	-	-	-	-	
228	54	35	36	41	47	41	47	51	56	48	36	33	42	47	44	47	35	43	33
229	31	39	37	42	45	42	46	55	49	55	49	49	43	39	43	41	45	41	35
230	26	28	30	34	31	31	33	35	29	32	33	31	27	26	29	30	34	32	26
231	24	28	33	30	38	31	36	34	30	34	35	33	33	34	29	30	35	33	-
232	24	27	46	34	37	52	33	37	33	32	33	51	25	49	52	45	33	56	34
233	30	31	40	35	35	35	35	38	41	-	-	-	-	-	-	-	-	-	-
234	40	32	45	45	55	40	51	49	40	42	-	-	-	-	-	-	-	-	-
235	28	24	40	29	31	32	22	36	28	36	30	30	28	29	27	35	32	36	27
236	46	29	37	38	49	49	48	40	48	61	39	46	39	40	-	-	-	-	-
237	34	34	39	35	38	41	38	37	33	36	34	33	28	50	42	35	46	44	33
238	25	36	30	47	35	38	51	48	49	32	-	-	-	-	-	-	-	-	-
239	38	29	35	56	65	54	41	40	38	70	49	48	39	44	41	41	27	-	-
240	36	43	45	50	52	45	47	47	49	63	49	51	-	-	-	-	-	-	-
241	35	32	50	47	53	48	45	46	46	46	39	-	-	-	-	-	-	-	-
242	29	39	38	46	45	43	43	42	43	52	-	-	-	-	-	-	-	-	-
243	28	28	33	36	45	37	35	48	44	42	58	35	32	59	40	48	46	-	-
244	30	33	40	56	32	39	30	42	38	32	47	38	36	50	36	37	42	41	30
245	44	41	43	53	54	49	43	46	56	63	54	41	44	41	50	66	42	40	44
246	28	39	35	43	45	45	48	42	52	54	41	39	50	47	44	54	31	43	40
247	25	24	33	28	36	36	39	35	43	33	34	37	36	32	32	a	33	35	27
248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
249	46	48	54	51	60	57	44	-	-	-	-	-	-	-	-	-	-	-	-
250	35	35	46	40	44	44	45	46	40	-	-	-	-	-	-	-	-	-	-

- = Animal dead

a = Food consumed not recorded due to technical error

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 29: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
251	41	40	32	39	40	39	40	38	37	36	38	38	35	34	33	34	39	23	28
252	42	32	26	32	34	33	31	31	32	27	29	28	31	28	27	29	34	21	25
253	59	37	27	34	66	42	43	43	44	60	41	49	50	37	38	51	39	49	26
254	49	31	29	49	58	44	43	46	42	53	34	47	43	52	48	36	55	54	46
255	45	34	23	48	51	41	42	40	53	51	27	44	48	39	43	29	32	56	26
256	49	33	20	41	55	35	43	40	42	51	44	40	43	43	44	39	39	47	21
257	52	37	27	54	54	38	41	46	54	52	33	43	47	43	46	47	36	54	32
258	60	36	27	43	52	39	38	54	45	60	32	48	54	36	43	44	51	49	29
259	52	34	27	44	53	39	44	44	39	55	40	46	46	45	50	50	57	31	31
666	47	41	26	37	51	27	34	39	35	49	29	40	58	34	42	43	44	51	27
261	51	40	16	49	58	42	40	38	51	58	39	44	47	42	40	42	38	49	26
262	53	42	31	40	51	36	35	35	40	48	31	41	40	35	40	33	47	36	27
263	64	34	36	52	54	33	38	49	35	53	35	34	54	45	47	63	49	57	46
264	52	34	32	45	56	43	43	47	39	59	36	56	50	46	53	42	68	53	52
265	53	26	28	38	49	40	39	34	44	50	33	49	38	41	38	44	37	35	25
266	39	41	36	42	40	41	35	43	43	34	38	26	42	48	44	43	43	38	35
267	60	48	34	49	59	45	50	50	38	51	31	46	42	39	45	47	50	41	44
268	52	34	39	52	60	46	48	48	55	70	50	41	54	45	52	51	47	37	44
269	56	33	35	45	54	43	39	40	43	60	38	36	44	40	44	40	43	52	41
270	51	33	39	52	57	43	46	41	49	53	38	50	55	46	44	44	35	47	26
271	48	35	36	48	57	49	47	51	45	54	45	51	42	51	43	44	50	41	39
272	62	53	33	50	58	47	44	31	51	58	30	44	39	39	43	47	52	53	31
273	63	45	24	46	55	43	39	54	38	56	35	51	43	44	48	37	32	27	30
401	e57	-	33	49	55	48	44	46	47	56	46	42	44	f	-	-	-	-	-
275	76	46	32	49	57	43	46	43	44	59	49	42	47	49	45	45	57	59	53

- = Animal dead

b = Food consumed measured over 6 day period due to technical error

e = Value for Pretrial represents that of Animal No. 2749 (not included in group mean);  
Values from Week 1 onwards represent that of Animal No. 4019

f = Animal missing from cage, presumed dead

Animal No. 2609 was re-earmarked Animal No. 6669 during Week 15 to avoid equivocality

Animal No. 2749 was replaced by Animal No 4019 during Pretrial due to it dying prior to the start of dosing

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 29: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
251	30	32	36	36	36	34	35	37	34	35	38	36	42	27	-	-	-	-	-
252	25	28	33	27	27	29	34	30	30	32	30	36	29	32	40	29	31	37	34
253	33	33	51	48	44	41	48	37	57	50	42	46	42	44	44	41	-	-	-
254	37	40	66	54	67	50	62	37	71	61	57	46	53	62	53	45	43	51	39
255	28	31	39	35	34	56	53	44	52	39	44	57	53	51	43	44	42	46	35
256	41	37	47	37	55	39	49	57	38	68	45	50	38	50	44	42	45	40	29
257	30	33	32	37	84	45	42	48	50	66	49	51	41	49	57	56	49	-	-
258	33	47	59	54	62	50	36	36	35	37	35	-	-	-	-	-	-	-	
259	41	35	53	35	36	39	49	48	44	53	-	-	-	-	-	-	-	-	
666	40	27	32	31	33	40	39	31	33	58	30	36	30	34	35	-	-	-	-
261	29	28	32	35	37	33	45	32	32	33	33	34	-	-	-	-	-	-	-
262	34	43	48	42	55	41	46	-	-	-	-	-	-	-	-	-	-	-	
263	43	48	54	43	49	44	45	51	42	53	55	51	46	-	-	-	-	-	
264	43	46	51	44	51	50	51	57	69	67	-	-	-	-	-	-	-	-	
265	27	28	40	30	32	44	35	41	43	69	60	35	43	46	36	43	43	49	40
266	33	33	47	35	38	39	37	40	35	39	37	39	41	42	-	-	-	-	-
267	25	29	37	43	52	51	59	49	70	60	70	51	40	53	46	43	34	43	38
268	42	36	60	49	57	44	50	44	59	66	46	44	39	49	40	39	39	46	36
269	33	36	47	38	48	47	38	44	52	59	56	42	46	48	48	43	44	44	38
270	35	29	39	32	34	31	31	37	30	27	36	31	34	39	36	36	38	55	46
271	44	44	53	50	52	45	46	48	35	57	59	56	45	51	40	41	31	-	-
272	32	31	53	34	48	48	40	48	59	56	44	-	-	-	-	-	-	-	
273	28	29	35	32	35	34	39	36	35	37	42	44	-	-	-	-	-	-	
401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
275	38	53	49	43	41	49	44	49	41	44	45	47	51	45	47	46	52	60	47

- = Animal dead

Animal No. 260 was re-earmarked Animal No. 666 during Week 15 to avoid equivocality

Animal No 274 was replaced by Animal No 401 during Pretrial due to its poor condition

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

## Individual Food Consumption: Males and Females

Group 2: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
276	52	45	23	53	61	42	49	50	41	65	42	46	48	51	42	53	54	44	40
277	53	44	33	44	49	35	47	37	37	54	30	26	39	35	41	29	33	24	30
278	53	45	37	49	56	36	49	49	29	48	48	42	54	53	58	56	63	59	44
279	75	32	46	45	64	42	46	51	49	64	49	48	49	53	55	61	46	45	30
280	42	44	40	39	51	41	44	50	49	54	45	43	39	44	45	50	49	50	41
281	57	38	31	36	47	36	36	50	48	55	37	38	54	37	40	33	32	38	29
282	59	30	38	54	60	48	42	56	44	49	47	46	52	45	49	48	46	44	32
283	53	33	37	53	67	40	45	52	50	63	32	45	49	50	39	41	35	37	33
284	41	37	33	50	55	46	41	43	42	49	39	46	43	39	42	47	47	33	33
285	58	33	35	47	57	42	41	50	52	58	50	49	50	45	48	50	46	45	39
286	59	39	32	50	61	49	48	52	40	58	49	43	49	55	46	40	37	57	34
287	55	40	26	51	57	41	46	58	48	51	43	44	39	42	39	43	42	45	26
288	50	43	38	42	54	40	39	52	54	53	37	52	45	45	59	52	51	51	38
289	47	45	41	44	51	40	47	57	48	55	37	40	52	45	40	51	53	51	47
290	70	45	37	60	67	45	41	53	57	58	48	43	45	47	50	50	46	50	50
291	51	36	34	49	57	43	48	54	42	48	38	45	35	38	32	37	52	27	37
292	66	45	31	49	67	49	53	58	53	60	48	47	57	44	40	34	54	71	42
293	62	41	43	51	58	41	30	44	32	50	34	32	47	41	48	50	35	42	33
294	49	39	32	47	50	41	38	42	51	52	36	48	45	51	45	42	52	44	42
295	61	50	34	56	66	48	40	54	48	51	44	44	55	52	48	51	42	46	37
296	48	45	47	54	60	48	46	63	53	58	44	41	53	43	53	42	45	46	41
297	60	41	29	51	55	43	46	51	48	56	39	44	52	47	48	47	45	55	43
298	59	40	33	51	55	39	44	58	43	49	42	52	55	53	54	48	52	45	44
299	63	48	43	49	57	44	40	52	55	58	39	46	50	47	53	53	46	40	36
300	a	33	35	49	58	38	42	48	50	55	37	41	43	42	42	50	58	51	35

a = Food consumed not recorded due to technical error

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 29: 100 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
276	43	38	59	49	52	50	37	50	62	64	51	48	52	51	47	48	37	43	36
277	29	38	43	30	35	38	35	39	39	40	33	36	35	36	36	37	37	51	39
278	35	39	60	48	56	35	52	37	56	-	-	-	-	-	-	-	-	-	
279	27	24	47	49	43	42	41	47	56	67	48	-	-	-	-	-	-	-	
280	32	23	41	47	51	36	-	-	-	-	-	-	-	-	-	-	-	-	
281	29	23	41	34	13	-	-	-	-	-	-	-	-	-	-	-	-	-	
282	40	31	48	36	35	59	38	62	55	65	71	33	25	45	43	44	45	40	46
283	30	39	40	40	42	46	45	35	57	50	50	53	50	48	55	46	42	-	-
284	32	35	39	37	41	48	31	43	52	70	64	64	48	51	40	-	-	-	-
285	42	41	55	47	55	53	50	56	60	48	68	50	49	60	51	51	-	-	-
286	33	38	46	43	43	42	48	54	61	61	46	45	49	51	50	41	37	-	-
287	38	32	51	51	59	39	41	41	-	-	-	-	-	-	-	-	-	-	-
288	39	36	50	42	44	49	41	45	33	-	-	-	-	-	-	-	-	-	-
289	41	38	48	35	45	50	56	51	60	50	54	48	60	56	41	48	33	48	39
290	45	37	54	53	54	48	49	37	54	69	49	44	50	52	62	36	44	-	-
291	39	39	51	48	64	52	51	56	49	56	56	50	52	51	46	48	49	43	37
292	33	42	55	48	46	53	48	49	49	70	48	46	51	44	62	-	-	-	-
293	37	35	60	47	43	47	50	43	45	60	41	42	-	-	-	-	-	-	-
294	36	38	39	30	35	33	38	44	48	a	33	37	30	39	-	-	-	-	-
295	34	37	41	44	52	42	45	44	43	-	-	-	-	-	-	-	-	-	-
296	32	49	40	49	51	48	43	46	47	43	48	-	-	-	-	-	-	-	-
297	46	39	40	45	49	48	54	52	55	55	53	44	45	42	36	40	42	48	44
298	32	29	34	37	39	39	40	41	40	40	37	56	40	-	-	-	-	-	-
299	36	36	40	38	42	47	39	45	53	50	-	-	-	-	-	-	-	-	-
300	29	38	47	48	61	42	36	41	59	58	47	48	-	-	-	-	-	-	-

- = Animal dead

a = Food consumed not recorded due to technical error

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 39: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
301	42	42	27	39	44	36	32	29	40	37	37	42	45	44	53	38	48	36	-
302	47	48	d19	50	55	45	34	34	28	41	47	42	48	45	48	39	36	44	41
303	57	49	26	46	60	38	36	35	40	50	48	49	51	51	51	55	55	49	53
304	57	53	23	51	57	45	37	34	60	39	38	46	45	36	44	33	30	52	28
305	64	59	31	46	58	51	42	34	44	53	46	49	43	46	55	56	46	23	31
306	38	51	35	43	42	40	31	38	45	48	43	43	42	42	50	43	38	46	37
307	55	46	40	51	58	51	39	41	47	63	53	36	48	41	49	49	40	40	42
308	59	48	29	54	57	48	45	45	48	66	45	50	43	47	53	54	60	67	49
309	38	40	36	45	44	41	46	44	46	44	45	44	46	41	42	50	51	49	42
310	40	58	34	45	55	41	35	42	50	53	46	47	54	48	45	51	49	66	39
311	41	46	32	48	56	44	36	37	52	55	41	47	49	47	48	36	36	64	45
312	45	57	40	54	64	48	46	38	46	64	39	47	41	40	38	58	40	38	37
313	60	56	28	50	55	52	36	43	56	58	45	25	59	41	49	32	34	30	33
314	60	69	31	43	55	47	47	46	52	55	49	37	50	46	49	56	44	26	28
315	54	57	d13	52	57	44	38	42	37	53	43	39	44	44	48	52	35	47	35
316	54	57	24	50	61	49	42	44	42	70	37	52	56	49	44	56	54	55	50
317	48	48	21	46	49	42	35	41	38	55	44	37	46	41	35	39	33	31	29
316	61	60	28	41	46	40	42	41	38	48	37	48	43	47	43	44	37	42	30
319	49	53	26	44	52	42	43	31	39	45	35	44	39	43	34	-	-	-	-
320	62	59	22	46	50	45	42	43	37	49	28	51	44	47	45	47	40	53	48
321	52	50	44	45	55	40	42	38	51	47	43	47	43	42	45	55	33	28	24
322	56	39	44	53	54	50	42	47	44	52	48	46	47	50	52	46	39	47	46
323	43	55	39	60	63	46	38	43	49	53	46	48	47	48	45	37	46	36	42
324	40	53	50	45	53	45	40	36	52	46	42	50	36	38	51	45	36	60	32
325	51	53	42	49	57	44	43	43	40	52	33	43	37	38	41	42	44	28	26

- = Animal dead

b = Food consumed measured over 6 day period due to technical error

d = Value from raw data noted as being low but still included in group means

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 3: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
302	38	35	31	42	45	43	37	48	41	61	43	36	42	39	33	33	36	38	39
303	45	36	48	51	74	58	47	47	59	59	58	-	-	-	-	-	-	-	
304	26	30	31	36	45	31	62	33	34	40	37	35	28	49	36	41	35	37	28
305	29	33	35	48	43	42	37	37	45	59	42	54	48	65	52	57	42	43	-
306	40	29	39	45	54	40	52	40	44	57	38	39	42	46	36	46	35	31	34
307	37	32	40	44	54	47	57	59	-	-	-	-	-	-	-	-	-	-	
308	39	47	42	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
309	46	46	50	53	53	52	52	52	49	53	54	52	52	53	50	49	31	47	33
310	33	35	42	47	54	57	59	38	53	63	56	56	53	61	53	37	23	42	36
311	47	39	38	57	50	61	57	38	42	68	59	61	53	49	46	47	44	49	51
312	34	48	40	57	45	56	48	42	54	68	42	64	61	53	47	49	38	44	27
313	31	31	33	38	37	45	45	39	36	38	33	36	39	41	37	35	37	43	29
314	27	25	30	31	34	31	36	32	30	32	32	32	30	29	33	-	-	-	-
315	35	46	33	46	61	63	67	44	51	72	41	63	45	60	59	38	29	50	40
316	35	36	42	44	63	51	57	47	43	60	53	48	49	52	53	44	55	54	31
317	26	27	34	36	40	37	47	39	36	55	36	38	36	35	40	46	32	-	-
318	23	27	32	43	36	39	38	47	41	69	39	62	31	59	56	35	40	a	-
319	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
320	39	20	30	32	22	30	46	48	32	52	41	39	32	40	30	47	29	-	-
321	25	30	30	38	48	53	63	48	33	63	36	36	43	45	36	33	44	40	31
322	46	37	38	44	42	47	56	46	53	47	49	52	38	48	45	48	50	44	40
323	45	48	57	43	47	49	45	42	58	54	36	53	56	53	48	47	-	-	-
324	32	36	48	36	39	39	45	40	53	85	-	-	-	-	-	-	-	-	
325	26	29	34	49	48	41	46	38	47	53	47	33	43	52	45	44	38	51	-

- = Animal dead

a = Food consumed not recorded due to technical error

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 3♀: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
326	51	44	42	50	56	37	37	41	47	60	45	49	51	51	48	57	48	37	47
327	53	50	40	54	59	44	58	35	47	57	45	49	45	53	57	47	39	30	55
328	39	33	45	39	46	47	48	44	44	45	43	44	42	50	44	35	40	46	35
329	66	58	48	49	62	40	40	47	48	57	49	49	53	51	52	44	51	49	37
330	41	40	43	45	58	44	46	36	42	47	41	43	49	43	35	39	46	42	28
331	42	40	34	41	52	48	54	45	32	51	45	37	42	47	44	54	34	33	30
332	54	57	27	44	54	42	45	37	49	54	38	43	44	42	37	55	40	31	28
333	59	57	40	55	58	58	45	49	50	59	47	52	48	47	44	44	48	36	31
334	57	57	43	49	66	40	50	52	32	59	45	40	46	40	48	39	36	37	35
335	50	44	43	52	49	37	43	46	36	43	40	38	33	17	43	35	32	29	33
336	45	50	47	46	51	32	36	39	54	48	53	35	40	51	38	41	34	36	32
337	48	52	37	50	43	37	42	31	37	42	45	37	39	49	35	32	40	27	31
338	47	56	56	59	67	43	47	53	62	54	48	58	50	47	53	61	53	73	44
339	72	50	43	58	58	49	48	43	40	48	44	47	51	45	51	56	57	51	45
340	62	53	44	47	61	46	50	49	44	48	50	43	46	44	41	50	48	59	36
341	50	48	40	54	59	39	40	52	38	45	42	49	45	49	51	47	32	22	-
342	63	69	43	49	63	54	41	48	55	52	43	46	43	53	49	52	54	62	51
343	45	42	47	55	61	52	41	43	51	61	53	55	41	56	35	37	34	32	34
344	55	52	38	48	54	43	37	42	43	54	36	42	45	42	41	44	37	27	26
345	75	59	47	45	56	40	41	39	48	50	43	46	51	45	47	44	55	35	37
346	72	59	45	51	59	39	49	40	34	56	39	51	45	50	45	45	50	49	43
347	57	46	41	43	55	38	34	36	51	50	38	46	51	43	44	33	38	35	42
348	65	46	42	54	51	43	42	45	50	50	45	47	40	43	42	41	51	48	43
349	42	40	35	41	48	35	43	36	49	36	38	35	37	45	33	31	44	28	30
350	65	46	44	56	69	43	44	49	57	52	51	52	51	44	37	35	37	29	32

- = Animal dead

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 3g: 300 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
326	42	44	45	44	43	48	51	45	68	55	45	50	38	52	45	47	39	-	-
327	34	43	40	37	41	37	54	45	35	48	34	36	37	38	30	-	-	-	-
328	31	28	41	42	45	47	58	51	40	56	44	-	-	-	-	-	-	-	-
329	35	38	41	52	52	48	61	49	55	65	44	54	54	62	39	40	42	-	-
330	29	32	35	44	39	38	47	40	35	36	37	34	37	41	35	37	34	36	-
331	29	45	37	38	40	42	44	50	52	66	41	60	49	49	34	49	39	-	-
332	27	35	33	34	38	47	55	39	60	75	50	38	56	50	55	52	40	39	37
333	28	29	30	35	38	39	42	42	35	37	38	36	35	35	32	35	38	45	32
334	35	40	38	39	45	38	47	41	38	38	36	46	44	52	45	39	30	45	35
335	28	28	32	34	38	36	41	39	35	39	36	35	35	35	36	38	35	38	35
336	29	33	31	36	44	48	40	40	38	61	39	39	35	37	38	42	50	46	32
337	23	28	29	33	36	33	34	40	28	34	30	38	29	32	28	33	30	40	30
338	38	41	43	57	58	62	52	-	-	-	-	-	-	-	-	-	-	-	-
339	35	32	54	59	66	56	67	47	54	80	65	63	53	64	46	56	34	39	42
340	39	32	41	57	58	50	57	50	57	64	40	54	36	39	38	41	36	39	33
341	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
342	34	32	51	39	58	53	55	-	-	-	-	-	-	-	-	-	-	-	-
343	31	33	36	47	41	46	49	46	43	47	42	40	35	40	39	39	42	46	35
344	27	31	31	42	39	33	51	41	47	59	48	51	41	45	44	47	40	44	42
345	34	30	37	47	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-
346	44	33	44	52	60	43	48	57	62	58	47	47	49	50	35	51	33	46	36
347	38	37	41	52	40	51	54	40	59	65	45	51	54	47	47	48	72	33	42
348	33	34	46	48	45	43	51	52	59	46	-	-	-	-	-	-	-	-	-
349	26	27	30	39	37	38	44	37	34	38	35	33	33	29	29	42	34	39	31
350	25	28	31	34	41	41	56	39	60	35	50	37	47	38	35	35	37	39	32

- = Animal dead

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 49: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
351	66	20	36	47	70	41	53	34	50	38	47	47	54	55	59	60	53	52	52
352	45	31	37	42	65	38	30	33	45	37	44	42	47	31	46	42	28	37	23
353	60	42	41	46	61	43	38	40	39	41	45	53	55	54	48	53	53	53	53
354	45	40	22	43	53	41	38	34	34	40	41	47	52	48	46	49	35	48	45
355	48	38	29	50	50	40	44	34	46	42	43	48	42	35	39	49	43	59	34
356	49	44	28	51	57	43	39	40	43	43	46	46	47	50	43	50	38	49	39
357	58	39	a	45	51	43	35	37	49	50	42	52	45	50	49	58	62	48	41
358	55	31	36	48	64	44	35	31	55	41	35	43	48	45	40	44	41	41	45
359	63	40	35	49	55	45	42	36	42	46	42	44	43	52	48	51	59	37	37
360	44	39	37	44	54	45	36	37	43	43	38	38	47	45	55	44	68	39	45
361	51	33	34	43	54	42	42	40	48	49	45	52	56	50	60	53	42	40	-
362	50	45	43	54	56	56	59	59	57	54	56	61	56	55	53	55	58	37	43
363	56	41	37	48	62	42	48	39	41	47	39	50	45	52	50	53	58	56	43
364	61	37	33	57	62	46	40	39	35	49	38	41	49	48	41	46	37	48	41
365	56	37	32	55	65	46	41	39	41	44	35	35	36	35	30	48	55	44	47
366	49	36	34	44	52	46	47	32	52	43	44	45	43	43	43	44	60	39	27
367	61	39	48	52	67	53	39	51	43	58	49	56	54	55	56	58	66	52	50
368	43	36	31	43	49	45	46	38	47	45	42	49	43	41	43	36	32	42	24
369	61	46	29	51	61	32	42	45	43	42	42	46	49	46	53	50	40	53	
370	64	32	43	55	65	46	45	46	50	50	57	47	47	56	52	63	56	53	50
371	41	38	42	43	53	43	45	41	37	41	44	39	45	38	45	50	48	50	49
372	53	35	36	53	42	48	40	46	51	55	41	49	49	46	53	46	47	37	32
373	60	24	32	46	49	44	42	41	47	46	47	44	54	49	57	34	32	45	25
374	40	42	35	45	55	46	44	41	38	52	47	46	47	43	48	52	59	57	54
375	60	27	37	46	49	41	35	44	38	47	52	41	51	46	37	44	54	51	30

- = Animals dead

a = Food consumed not recorded due to technical error

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

Individual Food Consumption (g): Males and Females

Group 49: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
351	46	43	65	70	60	53	66	48	58	65	47	34	57	52	39	-	-	-	-
352	23	23	30	40	26	33	34	36	37	34	33	29	36	29	32	30	a	33	39
353	33	34	47	59	56	46	57	48	71	79	61	43	59	63	58	53	58	57	42
354	38	40	50	48	62	40	52	49	62	61	47	44	47	50	45	61	46	40	41
355	42	35	36	42	49	40	56	39	40	42	37	35	40	37	41	42	-	-	-
356	40	38	41	40	43	42	54	47	44	49	46	60	45	39	50	41	38	43	33
357	42	26	52	45	59	44	56	49	57	68	45	62	54	50	54	48	50	50	33
358	37	39	47	46	56	42	52	53	59	61	50	-	-	-	-	-	-	-	-
359	30	35	46	51	38	43	53	35	53	50	42	40	40	45	41	49	45	32	42
360	27	32	32	48	36	33	48	35	-	-	-	-	-	-	-	-	-	-	-
361	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
362	51	50	69	55	63	43	57	53	45	56	49	46	54	55	51	43	48	45	-
363	45	32	52	52	58	49	55	51	48	61	48	46	53	44	54	-	-	-	-
364	32	35	53	48	47	36	47	54	55	55	47	29	43	58	40	41	48	39	35
365	27	30	51	36	36	34	49	46	59	48	43	37	44	45	38	45	47	38	-
366	32	22	42	33	55	48	42	34	22	45	42	38	44	40	38	48	46	43	34
367	43	52	58	50	40	52	56	58	75	58	43	46	42	48	55	42	-	-	-
368	28	38	32	40	50	42	45	51	32	32	39	39	46	49	39	45	41	42	25
369	36	38	46	74	40	45	49	49	46	56	46	44	46	53	-	-	-	-	-
370	28	32	59	58	58	52	63	41	53	-	-	-	-	-	-	-	-	-	-
371	31	33	40	35	42	37	61	42	38	40	45	37	40	51	50	40	39	62	50
372	37	44	42	39	45	46	54	45	42	43	46	49	47	45	-	-	-	-	-
373	22	26	32	30	32	33	16	31	30	30	35	31	16	-	-	-	-	-	-
374	46	46	67	48	56	54	78	52	71	75	46	47	48	62	55	57	50	42	40
375	27	39	33	49	36	42	57	36	41	37	48	47	35	67	33	44	-	-	-

- = Animal dead

a = Food consumed not recorded due to technical error

c = Food consumed measured over 6 day period

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 49: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Pretrial		Treatment Period (Weeks)																
	-2	-1	b1	2	3	4	5	6	7	8	9	10	11	12	13	16	20	24	28
376	57	42	39	50	53	43	46	46	47	48	46	51	51	46	56	49	41	56	39
377	41	45	40	45	58	45	45	36	33	41	39	48	43	37	47	28	30	37	28
378	51	42	37	42	48	38	36	27	35	44	40	36	51	44	46	36	38	40	29
379	51	38	38	50	58	49	39	43	51	50	35	49	50	42	48	46	55	46	42
380	58	30	42	47	49	56	36	39	44	53	43	45	35	36	30	30	32	29	27
381	58	45	50	55	69	62	57	48	42	65	50	58	56	57	50	50	43	51	40
382	51	48	43	54	59	51	56	45	46	44	49	44	47	44	44	59	48	64	39
383	50	44	42	41	44	45	45	54	48	49	50	51	46	54	47	46	39	33	39
384	54	42	31	47	55	48	52	43	43	48	50	49	48	44	50	45	48	60	41
385	53	34	37	48	54	45	54	40	38	43	51	42	47	41	52	41	33	31	30
386	49	35	28	34	48	35	42	38	45	34	35	46	43	40	49	50	36	47	39
387	62	48	45	59	61	53	51	46	51	46	50	52	49	55	47	64	53	37	35
388	50	41	36	52	53	42	50	43	42	48	44	43	41	34	35	29	31	37	31
389	57	33	33	57	61	43	51	41	38	44	50	41	51	47	60	52	40	44	47
390	51	32	46	47	49	35	44	45	48	54	44	62	49	36	48	44	48	50	36
391	50	38	30	42	53	43	43	34	44	46	33	33	42	36	48	46	47	49	37
392	54	46	40	48	a	46	58	54	57	47	52	53	56	56	60	55	59	54	52
393	62	39	46	57	60	44	46	45	45	47	55	48	53	43	54	50	57	55	46
394	48	40	33	47	53	47	42	44	41	46	42	47	46	44	50	49	55	62	47
395	44	41	28	43	53	42	44	42	44	44	45	46	39	41	47	49	48	43	49
396	58	40	35	48	58	53	49	40	49	45	50	50	41	52	51	47	33	45	30
397	48	43	47	49	47	50	39	51	46	47	47	45	46	40	42	38	34	39	26
398	54	44	41	50	47	38	48	44	65	52	54	55	56	57	53	49	52	43	46
399	63	40	28	48	54	40	44	53	49	40	44	57	41	38	36	33	32	51	28
400	61	36	24	48	49	42	50	48	43	56	48	53	40	51	49	46	39	37	36

a = Food consumed not recorded due to technical error

b = Food consumed measured over 6 day period due to technical error

APPENDIX 8 (continued)

## Individual Food Consumption (g): Males and Females

Group 4: 1000 mg Glyphosate.kg<sup>-1</sup>.day<sup>-1</sup>

Animal	Treatment Period (Weeks)																		
	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	c104
376	41	28	22	49	55	54	66	52	65	80	48	61	51	62	66	59	42	43	43
377	27	29	31	32	36	33	37	34	33	33	40	36	-	-	-	-	-	-	-
378	27	27	87	52	41	50	56	47	42	64	42	34	-	-	-	-	-	-	-
379	26	33	d2	50	47	46	56	52	46	67	48	53	40	45	45	45	43	55	-
380	26	28	43	34	25	46	50	39	28	35	32	35	40	41	44	-	-	-	-
381	39	37	64	49	70	45	62	58	69	51	48	60	58	41	34	42	64	39	30
382	38	41	36	50	40	47	57	55	47	49	41	54	43	50	38	47	49	48	34
383	45	51	34	56	52	51	46	49	45	46	46	42	47	-	-	-	-	-	-
384	29	28	43	34	36	41	43	40	35	46	43	59	25	33	39	53	55	37	31
385	29	41	34	31	40	36	45	43	39	45	-	-	-	-	-	-	-	-	-
386	28	24	46	42	39	38	36	47	50	56	41	50	43	40	37	43	50	37	34
387	32	37	37	36	42	36	43	36	36	38	36	41	36	47	47	45	-	-	-
388	24	24	34	30	43	43	39	40	31	45	41	31	51	31	34	33	36	42	31
389	36	26	33	34	43	41	38	48	43	55	35	29	29	34	33	31	35	56	32
390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
391	31	30	48	28	30	31	42	64	31	32	50	34	30	30	50	33	34	39	29
392	40	43	54	42	56	50	53	44	38	54	-	-	-	-	-	-	-	-	-
393	41	35	67	45	50	47	50	50	53	46	49	43	51	55	55	35	-	-	-
394	41	30	70	64	45	43	58	69	69	84	50	53	53	42	46	60	58	36	32
395	32	37	35	43	29	45	49	49	56	60	48	35	47	38	46	42	52	29	23
396	28	30	34	38	40	37	51	41	37	38	37	39	37	39	36	40	43	43	34
397	33	37	39	42	36	43	50	38	47	45	45	40	37	42	34	-	-	-	-
398	42	42	50	55	56	40	59	43	56	62	46	60	54	56	43	52	53	31	36
399	29	29	38	37	42	38	46	41	40	39	-	-	-	-	-	-	-	-	-
400	33	36	38	35	40	41	46	40	37	38	37	37	34	35	40	42	37	35	32

- = Animal dead

c = Food consumed measured over 6 day period

d = Value from raw data noted as being low but still included in group mean

APPENDIX 9

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Differential Blood Counts: During Week 52**  
**Individual Values: Males**

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	1	51	43	4	2
	2	36	61	1	2
	3	42	56	2	0
	4	23	72	1	4
	5	44	51	1	4
	6	59	36	2	3
	7	39	58	1	2
	8	45	47	3	5
	9	30	66	1	3
	10	-	-	-	-
	11	38	54	2	6
	12	53	44	2	1
	13	35	61	1	3
	14	46	44	1	9
	15	43	54	3	0
	16	35	56	2	7
	17	-	-	-	-
	18	47	48	2	3
	19	35	56	4	5
	20	43	54	2	1

- = Animal dead

APPENDIX 9 (continued)

Differential Blood Counts: During Week 52  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	21	32	66	1	1
	22	38	51	3	8
	23	38	57	3	2
	24	48	47	1	4
	25	20	73	2	5
	26	47	49	3	1
	27	37	62	1	0
	28	-	-	-	-
	29	-	-	-	-
	30	30	67	2	1
	31	66	26	5	3
	32	35	62	3	0
	33	41	55	2	2
	34	35	57	1	7
	35	53	44	3	0
	36	47	37	10	6
	37	38	52	8	2
	38	34	61	5	0
	39	47	45	2	6
	40	35	53	5	7

- = Animal dead

APPENDIX 9 (continued)

Differential Blood Counts: During Week 52  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	41	40	51	3	6
	42	58	31	8	3
	43	42	53	4	1
	44	50	38	8	4
	45	41	45	10	4
	46	29	53	4	14
	47	30	50	6	14
	48	33	46	10	11
	49	35	48	7	10
	50	44	55	1	0

APPENDIX 9 (continued)

Differential Blood Counts: During Week 52  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	151	50	45	5	0
	152	28	70	2	0
	153	31	64	0	5
	154	39	54	3	4
	155	-	-	-	-
	156	38	55	3	4
	157	34	62	2	2
	158	43	53	4	0
	159	39	53	2	6
	160	39	55	4	2
	161	36	59	3	2
	162	56	40	1	3
	163	-	-	-	-
	164	36	59	2	3
	165	26	63	4	7
	166	45	51	2	2
	167	45	47	3	5
	168	61	33	2	4
	169	62	32	3	3
	170	34	65	1	0

- = Animal dead

APPENDIX 9 (continued)

Differential Blood Counts: During Week 52  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	171	44	54	2	0
	172	30	70	0	0
	173	44	50	0	6
	174	34	61	2	3
	175	43	51	5	1
	176	41	55	1	3
	177	35	58	2	5
	178	36	61	2	1
	179	43	50	2	5
	180	43	49	4	4
	181	a	a	a	a
	182	35	55	4	6
	183	43	56	1	0
	184	44	51	1	4
	185	a	a	a	a
	186	58	32	8	2
	187	a	a	a	a
	188	47	41	7	5
	189	-	-	-	-
	190	-	-	-	-

- = Animal dead

a = No sample obtained

APPENDIX 9 (continued)

Differential Blood Counts: During Week 52  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	191	29	60	5	6
	192	36	51	8	5
	193	-	-	-	-
	194	24	62	8	6
	195	65	24	10	1
	196	42	51	7	0
	197	39	51	6	4
	198	66	28	2	4
	199	56	37	5	2
	200	44	42	11	3

- = Animal dead

APPENDIX 10

Glyphosate  
 104 Week Dietary Carcinogenicity Study in Mice  
 Differential Blood Counts: During Week 77  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	1	39	60	1	0
	2	30	65	0	5
	3	41	52	4	3
	4	28	66	0	6
	5	-	-	-	-
	6	-	-	-	-
	7	46	42	0	12
	8	-	-	-	-
	9	-	-	-	-
	10	-	-	-	-
	11	55	44	0	1
	12	68	31	0	1
	13	54	43	1	2
	14	27	66	0	7
	15	25	70	5	0
	16	45	52	0	3
	17	-	-	-	-
	18	35	59	1	5
	19	33	60	2	5
	20	-	-	-	-

- = Animal dead

APPENDIX 10 (continued)

Differential Blood Counts: During Week 77  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	21	47	51	0	2
	22	70	28	2	0
	23	49	49	2	0
	24	-	-	-	-
	25	33	63	0	4
	26	53	43	0	4
	27	-	-	-	-
	28	-	-	-	-
	29	-	-	-	-
	30	41	50	1	8
	31	-	-	-	-
	32	43	53	3	1
	33	37	57	2	4
	34	29	70	1	0
	35	-	-	-	-
	36	42	54	2	2
	37	26	70	0	4
	38	61	34	2	3
	39	47	46	1	6
	40	-	-	-	-

- = Animal dead

APPENDIX 10 (continued)

Differential Blood Counts: During Week 77  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	41	42	56	0	2
	42	44	53	0	3
	43	46	48	6	0
	44	45	49	3	3
	45	48	48	0	4
	46	61	34	2	3
	47	28	61	0	11
	48	29	66	1	4
	49	34	54	0	12
	50	52	40	2	6

APPENDIX 10 (continued)

Differential Blood Counts: During Week 77  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
	151	42	54	0	4
	152	29	68	1	2
	153	28	66	2	4
	154	-	-	-	-
	155	-	-	-	-
	156	56	40	1	3
	157	24	71	3	2
	158	51	46	1	2
	159	-	-	-	-
	160	-	-	-	-
4 (1000)	161	37	58	1	4
	162	42	51	1	6
	163	-	-	-	-
	164	-	-	-	-
	165	40	55	0	5
	166	46	51	2	1
	167	45	46	1	8
	168	60	36	0	4
	169	48	47	2	3
	170	47	52	0	1

- = Animal dead

APPENDIX 10 (continued)

Differential Blood Counts: During Week 77  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	171	40	53	1	6
	172	-	-	-	-
	173	-	-	-	-
	174	-	-	-	-
	175	40	60	0	0
	176	60	39	0	1
	177	51	46	1	2
	178	61	33	2	4
	179	26	71	0	3
	180	-	-	-	-
	181	47	48	0	5
	182	54	43	1	2
	183	40	59	0	1
	184	57	40	0	3
	185	59	39	0	2
	186	72	24	0	4
	187	43	56	0	1
	188	47	50	0	3
	189	-	-	-	-
	190	-	-	-	-

- = Animal dead

APPENDIX 10 (continued)

Differential Blood Counts: During Week 77  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	191	34	57	2	7
	192	30	62	1	7
	193	-	-	-	-
	194	33	65	1	1
	195	-	-	-	-
	196	34	65	1	0
	197	37	60	1	2
	198	56	41	1	2
	199	55	36	1	8
	200	49	41	0	10

- = Animal dead

APPENDIX 11

Glyphosate  
 104 Week Dietary Carcinogenicity Study in Mice  
 Differential Blood Counts: During Week 102  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	1	17	81	1	1
	2	-	-	-	-
	3	70	27	2	1
	4	-	-	-	-
	5	-	-	-	-
	6	-	-	-	-
	7	48	44	2	6
	8	-	-	-	-
	9	-	-	-	-
	10	-	-	-	-
	11	57	36	2	5
	12	-	-	-	-
	13	-	-	-	-
	14	51	39	3	7
	15	33	65	2	0
	16	38	56	0	6
	17	-	-	-	-
	18	49	47	3	1
	19	48	47	2	3
	20	-	-	-	-

- = Animal dead

APPENDIX 11 (continued)

Differential Blood Counts: During Week 102  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	21	35	62	1	2
	22	66	34	0	0
	23	60	37	2	1
	24	-	-	-	-
	25	37	56	2	5
	26	68	26	5	1
	27	-	-	-	-
	28	-	-	-	-
	29	-	-	-	-
	30	40	55	2	3
	31	-	-	-	-
	32	22	77	1	0
	33	57	41	1	1
	34	37	62	1	0
	35	-	-	-	-
	36	-	-	-	-
	37	39	56	2	3
	38	62	37	1	0
	39	-	-	-	-
	40	-	-	-	-

- = Animal dead

APPENDIX 11 (continued)

Differential Blood Counts: During Week 102  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	41	45	48	0	7
	42	52	46	1	1
	43	-	-	-	-
	44	35	58	5	2
	45	49	49	1	1
	46	-	-	-	-
	47	-	-	-	-
	48	26	69	3	2
	49	31	56	1	12
	50	52	44	1	3

- = Animal dead

APPENDIX 11 (continued)

Differential Blood Counts: During Week 102  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	151	31	65	0	4
	152	28	63	3	6
	153	-	-	-	-
	154	-	-	-	-
	155	-	-	-	-
	156	48	47	0	5
	157	26	70	3	1
	158	-	-	-	-
	159	-	-	-	-
	160	-	-	-	-
	161	82	16	2	0
	162	74	21	1	4
	163	-	-	-	-
	164	-	-	-	-
	165	-	-	-	-
	166	43	56	1	0
	167	47	50	0	3
	168	-	-	-	-
	169	42	53	0	5
	170	49	48	1	2

- = Animal dead

APPENDIX 11 (continued)

Differential Blood Counts: During Week 102  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	171	47	46	0	7
	172	-	-	-	-
	173	-	-	-	-
	174	-	-	-	-
	175	62	37	0	1
	176	75	23	1	1
	177	37	61	1	1
	178	-	-	-	-
	179	-	-	-	-
	180	-	-	-	-
	181	77	19	3	1
	182	36	62	0	2
	183	-	-	-	-
	184	46	51	0	3
	185	55	40	1	4
	186	42	39	1	18
	187	40	54	1	5
	188	-	-	-	-
	189	-	-	-	-
	190	-	-	-	-

- = Animal dead

APPENDIX 11 (continued)

Differential Blood Counts: During Week 102  
 Individual Values: Males

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	191	34	66	0	0
	192	30	61	2	7
	193	-	-	-	-
	194	50	46	4	0
	195	-	-	-	-
	196	38	58	3	1
	197	-	-	-	-
	198	-	-	-	-
	199	53	47	0	0
	200	60	33	1	6

- = Animal dead

APPENDIX 12

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Differential Blood Counts: During Week 52**  
**Individual Values: Females**

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	201	38	54	6	2
	202	33	49	8	10
	203	35	53	3	9
	204	42	49	4	5
	205	47	44	4	5
	206	35	52	8	5
	207	43	48	8	1
	208	51	41	8	0
	209	44	41	8	7
	210	45	40	12	3
	211	41	46	12	1
	212	68	28	4	0
	213	52	39	6	3
	214	33	53	13	1
	215	36	54	6	4
	216	45	55	0	0
	217	28	67	2	3
	218	46	51	2	1
	219	36	49	8	7
	220	42	45	11	2

APPENDIX 12 (continued)

Differential Blood Counts: During Week 52  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	221	-	-	-	-
	222	34	46	14	6
	223	25	63	12	0
	224	46	44	3	7
	225	57	39	4	0
	226	43	40	10	7
	227	51	42	7	0
	228	63	37	0	0
	229	46	46	6	2
	230	21	65	7	7
	231	51	38	7	4
	232	34	62	4	0
	233	32	65	2	1
	234	35	55	5	5
	235	52	41	3	4
	236	51	33	10	6
	237	35	57	3	5
	238	44	42	12	2
	239	28	55	11	6
	240	50	33	11	6

- = Animal dead

APPENDIX 12 (continued)

Differential Blood Counts: During Week 52  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	241	34	54	12	0
	242	45	40	10	5
	243	37	51	9	3
	244	36	47	11	6
	245	53	27	11	9
	246	51	38	5	6
	247	41	51	4	4
	248	-	-	-	-
	249	42	44	6	8
	250	57	32	4	7

- = Animal dead

APPENDIX 12 (continued)

Differential Blood Counts: During Week 52  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	351	59	25	14	2
	352	34	55	10	1
	353	38	50	9	3
	354	43	50	7	0
	355	49	49	1	1
	356	30	67	1	2
	357	46	46	7	1
	358	38	50	10	2
	359	43	51	4	2
	360	41	53	5	1
	361	-	-	-	-
	362	74	17	8	1
	363	64	27	4	5
	364	26	64	3	7
	365	24	66	4	6
	366	32	59	7	2
	367	38	47	7	8
	368	48	42	4	6
	369	65	30	4	1
	370	49	40	11	0

- = Animal dead

APPENDIX 12 (continued)

Differential Blood Counts: During Week 52  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
	371	31	63	5	1
	372	60	32	5	3
	373	25	67	6	2
	374	23	72	2	3
	375	35	61	4	0
	376	58	31	5	6
	377	45	53	2	0
	378	22	71	5	2
	379	49	38	7	6
	380	40	51	6	3
	381	40	55	5	0
	382	37	46	10	7
	383	44	52	0	4
	384	35	51	12	2
	385	42	49	7	2
	386	48	37	7	8
	387	47	48	5	0
	388	33	60	2	5
	389	47	40	12	1
	390	-	-	-	-

- = Animal dead

APPENDIX 12 (continued)

Differential Blood Counts: During Week 52  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	391	43	53	4	0
	392	67	13	20	0
	393	39	57	4	0
	394	38	54	7	1
	395	45	46	6	3
	396	22	71	7	0
	397	39	40	14	7
	398	43	51	5	1
	399	59	39	2	0
	400	20	72	7	1

APPENDIX 13

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Differential Blood Counts: During Week 77**  
**Individual Values: Females**

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	201	50	49	0	1
	202	54	41	2	3
	203	-	-	-	-
	204	56	41	1	2
	205	51	45	1	3
	206	41	52	2	5
	207	43	57	0	0
	208	56	42	1	1
	209	44	49	0	7
	210	59	40	0	1
	211	53	46	0	1
	212	44	54	1	1
	213	52	44	1	3
	214	54	43	0	3
	215	56	36	0	8
	216	56	39	0	5
	217	35	61	0	4
	218	59	41	0	0
	219	54	44	0	2
	220	38	57	2	3

- = Animal dead

APPENDIX 13 (continued)

Differential Blood Counts: During Week 77  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	221	-	-	-	-
	222	46	49	2	3
	223	43	54	1	2
	224	40	58	1	1
	225	-	-	-	-
	226	-	-	-	-
	227	-	-	-	-
	228	49	50	0	1
	229	53	42	2	3
	230	30	69	0	1
	231	63	34	0	3
	232	48	50	0	2
	233	-	-	-	-
	234	-	-	-	-
	235	62	36	2	0
	236	53	36	2	9
	237	41	49	0	10
	238	-	-	-	-
	239	23	75	1	1
	240	88	11	0	1

- = Animal dead

APPENDIX 13 (continued)

Differential Blood Counts: During Week 77  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	241	-	-	-	-
	242	-	-	-	-
	243	40	60	0	0
	244	45	49	1	5
	245	57	41	2	0
	246	48	47	0	5
	247	41	49	1	9
	248	-	-	-	-
	249	-	-	-	-
	250	-	-	-	-

- = Animal dead

APPENDIX 13 (continued)

Differential Blood Counts: During Week 77  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
	351	51	47	1	1
	352	48	46	0	6
	353	47	49	4	0
	354	62	35	1	2
	355	54	44	1	1
	356	38	61	1	0
	357	69	29	1	1
	358	-	-	-	-
	359	38	59	1	2
	360	-	-	-	-
4 (1000)	361	-	-	-	-
	362	66	33	0	1
	363	60	32	0	8
	364	42	48	2	8
	365	45	51	3	1
	366	39	50	0	11
	367	47	47	3	3
	368	59	36	0	5
	369	56	42	1	1
	370	-	-	-	-

- = Animal dead

APPENDIX 13 (continued)

Differential Blood Counts: During Week 77  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
	371	44	55	1	0
	372	47	53	0	0
	373	48	51	1	0
	374	35	64	0	1
	375	37	59	2	2
	376	59	37	0	4
	377	55	40	3	2
	378	77	21	0	2
	379	46	50	3	1
	380	54	43	2	1
	381	59	41	0	0
	382	42	52	3	3
	383	47	50	0	3
	384	61	36	1	2
	385	-	-	-	-
	386	45	54	0	1
	387	35	58	7	0
	388	37	62	0	1
	389	35	61	1	3
	390	-	-	-	-

- = Animal dead

APPENDIX 13 (continued)

Differential Blood Counts: During Week 77  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	391	45	53	0	2
	392	-	-	-	-
	393	55	45	0	0
	394	35	64	0	1
	395	48	46	1	5
	396	40	59	0	1
	397	41	51	2	6
	398	60	34	0	6
	399	-	-	-	-
	400	33	64	2	1

- = Animal dead

APPENDIX 14

**Glyphosate**  
**104 Week Dietary Carcinogenicity Study in Mice**  
**Differential Blood Counts: During Week 102**  
**Individual Values: Females**

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
	201	29	66	3	2
	202	-	-	-	-
	203	-	-	-	-
	204	61	36	1	2
	205	66	31	0	3
	206	78	22	0	0
	207	-	-	-	-
	208	51	48	1	0
	209	-	-	-	-
1 (0)	210	65	33	1	1
	211	49	48	1	2
	212	-	-	-	-
	213	-	-	-	-
	214	53	47	0	0
	215	-	-	-	-
	216	b	b	b	b
	217	-	-	-	-
	218	55	42	2	1
	219	-	-	-	-
	220	43	54	1	2

- = Animal dead

b = No film prepared in error

APPENDIX 14 (continued)Differential Blood Counts: During Week 102  
Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	221	-	-	-	-
	222	-	+	-	-
	223	-	-	-	-
	224	-	+	-	-
	225	+	+	-	-
	226	-	-	-	-
	227	-	-	-	-
	228	b	b	b	b
	229	45	48	2	5
	230	22	72	1	5
	231	51	47	2	0
	232	65	35	0	0
	233	-	-	-	-
	234	-	-	-	-
	235	59	39	1	1
	236	-	-	-	-
	237	b	b	b	b
	238	-	-	-	-
	239	-	-	-	-
	240	-	-	-	-

- = Animal dead

b = No film prepared in error

APPENDIX 14 (continued)

Differential Blood Counts: During Week 102  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
1 (0)	241	-	-	-	-
	242	-	-	-	-
	243	-	-	-	-
	244	38	56	6	0
	245	56	39	4	1
	246	40	57	1	2
	247	41	55	4	0
	248	-	-	-	-
	249	-	-	-	-
	250	-	-	-	-

- = Animal dead

APPENDIX 14 (continued)

Differential Blood Counts: During Week 102  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
	351	-	-	-	-
	352	31	64	3	2
	353	51	44	1	4
	354	47	52	1	0
	355	-	-	-	-
	356	49	51	0	0
	357	47	52	1	0
	358	-	-	-	-
	359	39	59	1	1
	360	-	-	-	-
4 (1000)	361	-	-	-	-
	362	57	42	0	1
	363	-	-	-	-
	364	35	59	1	5
	365	94	5	0	1
	366	32	52	1	15
	367	-	-	-	-
	368	29	63	2	6
	369	-	-	-	-
	370	-	-	-	-

- = Animal dead

APPENDIX 14 (continued)

Differential Blood Counts: During Week 102  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	371	29	71	0	0
	372	-	-	-	-
	373	-	-	-	-
	374	35	60	1	4
	375	-	-	-	-
	376	b	b	b	b
	377	-	-	-	-
	378	-	-	-	-
	379	80	18	2	0
	380	-	-	-	-
	381	44	53	2	1
	382	35	60	4	1
	383	-	-	-	-
	384	63	35	1	1
	385	-	-	-	-
	386	42	55	1	2
	387	-	-	-	-
	388	40	57	3	0
	389	34	60	4	2
	390	-	-	-	-

- = Animal dead

b = No film prepared in error

APPENDIX 14 (continued)

Differential Blood Counts: During Week 102  
 Individual Values: Females

Group/Dose Level (mg Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )	Animal No	Differential (%)			
		Neut	Lymp	Mono	Eos
4 (1000)	391	28	72	0	0
	392	-	-	-	-
	393	-	-	-	-
	394	37	59	4	0
	395	68	29	0	3
	396	66	28	3	3
	397	-	-	-	-
	398	48	49	1	2
	399	-	-	-	-
	400	41	58	1	0

- = Animal dead

APPENDIX 15

Glyphosate  
104 Weeks Dietary Carcinogenicity Study in Mice  
Absolute Organ Weights (g)  
Individual Values: Males

Group/Dose Level (mg Glyphosate, kg <sup>-1</sup> .day <sup>-1</sup> )	Animal	Body Weight (g)	Adrenals	Brain	Heart	Kidneys	Liver	Lungs	Sal 1	Pituitary	Prostate	Sal 1	Spleen	Testes	Thymus
1 (0)	7	46	0.003	0.49	0.22	0.84	2.32	0.24	0.09	0.003	0.05	0.27	0.08	0.38	0.02
	11	37	0.005	0.49	0.23	0.76	2.35	0.34	0.10	0.001	0.03	0.25	0.08	0.32	0.02
	14	43	0.016	0.50	0.24	0.82	2.30	0.33	0.08	0.001	0.08	0.32	0.08	0.52	0.02
	19	45	0.004	0.52	0.29	0.87	2.04	0.36	0.14	0.002	0.05	0.24	0.06	0.35	0.02
	21	31	0.009	0.51	0.24	0.69	2.48	0.33	0.06	0.002	0.03	0.29	0.10	0.22	0.01
	34	40	0.007	a	a	0.95	4.11	0.44	0.05	0.001	0.04	0.31	0.27	0.34	0.02
	37	44	0.007	0.55	0.24	0.91	2.75	0.27	0.12	0.003	0.09	0.28	0.13	0.35	0.01
	41	39	0.008	0.49	0.22	0.80	1.86	0.23	0.03	b	0.03	0.27	0.05	0.29	0.03
	48	37	0.008	0.48	0.26	0.66	4.54	0.23	0.05	0.003	0.04	0.12	0.13	0.29	0.01
	49	47	0.003	0.49	0.28	0.90	2.26	0.26	0.07	0.002	0.10	0.35	0.11	0.38	0.02
2 (100)	59	40	0.011	0.55	0.27	0.95	2.25	0.33	0.29	0.002	0.05	0.29	0.13	0.31	0.03
	60	47	0.006	0.51	0.24	0.95	2.79	0.18	0.04	0.001	0.07	0.36	0.09	0.36	0.01
	61	42	0.003	0.52	0.25	0.87	2.42	0.24	0.13	0.001	0.03	0.26	0.08	0.32	0.02
	63	47	0.006	0.50	0.25	0.78	2.78	0.32	0.12	0.004	0.08	0.27	0.31	0.36	0.02
	65	40	0.005	0.44	0.26	0.67	2.45	0.71	0.10	0.003	0.03	0.24	0.09	0.30	0.03
	76	45	0.004	0.49	0.23	0.83	2.12	0.24	0.10	0.002	0.04	0.28	0.08	0.39	0.02
	78	43	0.004	0.50	0.21	0.70	1.90	0.23	0.09	0.002	0.02	0.23	0.06	0.35	0.02
	84	46	0.004	0.51	0.28	1.42	2.63	0.33	0.05	0.002	0.08	0.26	0.10	0.38	0.03
	96	38	0.006	0.48	0.22	0.98	4.83	0.23	0.06	0.002	0.05	0.18	0.07	0.49	0.02
	98	44	0.002	0.50	0.21	0.77	2.19	0.24	0.11	0.002	0.10	0.39	0.08	0.37	0.02

Sal 1 = Parotid salivary glands

Sal 2 = Sublingual and submaxillary salivary glands

a = Organ weights for brain and heart considered to be spurious therefore excluded from statistical analyses

b = Pituitary not weighed due to balance malfunction

APPENDIX 15 (continued)

Absolute Organ Weights (g)  
Individual Values: Females

Group/Dose Level (mg Glyphosate. kg <sup>-1</sup> .day <sup>-1</sup> )	Animal	Body Weight (g)	Adrenals	Brain	Heart	Kidneys	Liver	Lungs	Sal 1	Pituitary	Prostate	Sal 2	Spleen	Testes	Thymus
3 (300)	102	41	0.003	0.49	0.22	0.77	2.09	0.44	0.10	0.002	0.05	0.23	0.09	0.37	0.02
	103	42	0.003	0.50	0.21	0.91	3.37	0.28	0.06	0.001	0.07	0.18	0.42	0.39	0.05
	117	50	0.001	0.47	0.28	0.82	3.02	0.27	0.07	0.002	0.04	0.20	0.11	0.35	0.05
	118	43	0.006	0.51	0.27	0.89	2.42	0.28	0.13	0.003	0.06	0.26	0.11	0.33	0.02
	120	49	0.002	0.47	0.28	1.15	6.12	0.43	0.07	0.002	0.04	0.35	0.19	0.38	0.04
	124	40	0.005	0.52	0.24	0.74	1.91	0.55	0.13	0.001	0.08	0.26	0.07	0.40	0.02
	135	40	0.005	0.48	0.23	0.86	1.90	0.24	0.07	0.003	0.03	0.27	0.10	0.38	0.03
	145	39	0.007	0.48	0.25	0.83	1.93	0.26	0.17	0.003	0.03	0.30	0.09	0.37	0.02
	149	55	0.007	0.51	0.30	0.88	3.51	0.27	0.28	0.002	0.05	0.20	0.10	0.34	0.06
	150	52	0.011	0.47	0.31	0.83	2.92	0.28	0.05	0.003	0.03	0.17	0.09	0.24	0.02
4 (1000)	151	43	0.003	0.43	0.24	1.63	5.06	0.61	0.05	0.001	0.03	0.26	1.01	0.26	0.13
	157	47	0.004	0.53	0.23	0.65	2.00	0.26	0.09	0.002	0.06	0.22	0.15	0.43	0.04
	162	31	0.004	0.56	0.27	0.99	2.01	0.34	0.08	0.030	0.03	0.26	0.12	0.38	0.03
	167	38	0.003	0.48	0.21	0.75	1.74	0.29	0.04	0.006	0.03	0.28	0.08	0.35	0.02
	177	43	0.003	0.50	0.26	0.94	4.59	0.26	0.05	0.002	0.04	0.22	0.11	0.38	0.02
	181	32	0.005	0.51	0.28	0.65	6.70	0.44	0.04	0.001	0.02	0.13	0.12	0.26	0.02
	182	41	0.004	0.47	0.25	0.81	2.59	0.27	0.07	0.002	0.08	0.28	0.14	0.32	0.02
	191	35	0.006	0.45	0.23	0.72	2.04	0.21	0.23	0.003	0.05	0.12	0.07	0.30	0.02
	194	45	c	0.51	0.24	0.88	3.02	0.31	0.12	0.001	0.06	0.37	0.78	0.44	0.02
	199	39	0.006	0.52	0.21	0.83	2.08	0.28	0.08	0.003	0.03	0.21	0.11	0.37	0.03

Sal 1 = Parotid salivary glands

Sal 2 = Sublingual and submaxillary salivary glands

c = Adrenals lost at necropsy

## APPENDIX 16

Glyphosate  
104 Week Dietary Carcinogenicity Study in Mice  
Absolute Organ Weights (g)  
Individual Values: Females

Group/Dose Level (mg Glyphosate. kg <sup>-1</sup> .day <sup>-1</sup> )	Animal	Body Weight (g)	Adrenals	Brain	Heart	Kidneys	Liver	Lungs	Ovaries	Sal 1	Pituitary	Sal 2	Spleen	Thymus	Uterus
1 (0)	205	37	0.007	0.54	0.28	0.49	2.29	0.26	0.115	0.05	0.002	0.14	0.19	0.02	0.46
	211	48	0.018	0.52	0.26	0.53	2.16	0.28	0.043	0.07	0.002	0.15	0.14	0.02	3.10
	218	31	0.009	0.52	0.17	0.47	1.72	0.28	0.452	0.06	0.003	0.16	0.12	0.02	0.58
	220	47	0.007	0.52	0.23	0.63	2.25	0.28	0.042	0.06	0.004	0.14	0.12	0.02	0.45
	228	36	0.008	0.52	0.21	0.60	2.57	0.29	0.214	0.05	0.002	0.17	0.51	0.03	0.43
	229	40	0.008	0.52	0.22	0.53	1.93	0.38	0.350	0.12	0.002	0.16	0.14	0.02	2.67
	232	32	0.012	0.50	0.17	0.49	1.28	0.21	1.936	0.04	0.002	0.12	0.18	0.02	2.29
	235	33	0.011	0.47	0.15	0.47	1.41	0.21	0.208	0.07	0.002	0.17	0.13	0.06	5.89
	245	38	0.005	0.49	0.19	0.52	2.15	0.26	0.340	0.12	0.002	0.16	0.15	0.01	5.45
	247	31	0.006	0.54	0.16	0.40	1.73	0.22	0.030	0.09	0.001	0.17	0.10	0.01	0.27
2 (100)	252	33	0.007	0.50	0.17	0.43	1.61	0.21	0.912	0.10	0.001	0.16	0.08	0.05	0.38
	256	35	0.013	0.47	0.20	0.49	2.21	0.29	0.262	0.07	0.002	0.21	0.27	0.13	1.96
	265	32	0.003	0.52	0.16	0.48	1.61	0.21	0.103	0.06	0.006	0.14	0.09	0.02	0.27
	267	38	0.005	0.50	0.18	0.54	1.73	0.42	0.032	0.06	0.003	0.13	0.11	0.02	0.71
	268	39	0.011	0.54	0.18	0.47	1.99	0.25	0.013	0.04	0.004	0.12	0.12	0.02	1.00
	270	40	0.007	0.52	0.20	0.59	2.02	0.30	0.065	0.05	0.002	0.16	0.11	0.03	1.79
	275	42	0.007	0.55	0.24	0.58	2.05	0.24	1.320	0.08	0.004	0.08	0.10	0.17	3.00
	276	35	0.011	0.55	0.19	0.56	1.71	0.36	0.028	0.16	0.005	0.13	0.08	0.03	0.38
	277	31	0.008	0.51	0.17	0.45	1.36	0.21	0.999	0.06	0.002	0.15	0.14	0.02	2.41
	291	27	0.007	0.53	0.20	0.52	1.48	0.22	0.530	0.09	0.001	0.11	0.09	0.03	0.48

Sal 1 = Parotid salivary glands

Sal 2 = Sublingual and submaxillary salivary glands

## APPENDIX 16 (continued)

Absolute Organ Weights (g)  
Individual Values: Females

Group/Dose Level (mg Glyphosate, kg <sup>-1</sup> .day <sup>-1</sup> )	Animal	Body Weight (g)	Adrenals	Brain	Heart	Kidneys	Liver	Lungs	Ovaries	Sal 1	Pituitary	Sal 2	Spleen	Thymus	Uterus
3 (300)	302	39	0.004	0.49	0.19	0.49	1.94	0.29	1.278	0.07	0.002	0.13	0.15	0.08	0.76
	304	28	0.005	0.47	0.15	0.43	1.47	0.44	0.013	0.11	0.001	0.11	0.11	0.09	0.35
	306	36	0.013	0.49	0.17	0.48	1.71	0.25	0.016	0.06	0.003	0.16	0.10	0.04	1.00
	309	37	0.012	0.53	0.30	0.50	1.70	0.45	4.206	0.04	0.010	0.17	0.13	0.02	0.70
	313	35	0.005	0.53	0.18	0.49	1.70	0.21	0.269	0.05	0.003	0.14	0.09	0.03	0.52
	315	46	0.013	0.44	0.21	0.48	1.21	0.23	10.879	0.06	d	0.13	0.16	0.02	8.89
	316	39	0.007	0.51	0.19	0.68	2.52	0.22	0.851	0.16	0.005	0.19	0.08	0.02	0.13
	322	36	0.006	0.53	0.29	0.64	1.61	0.24	0.686	0.10	0.004	0.16	0.21	0.02	1.30
	339	31	0.010	0.53	0.18	0.51	1.45	0.24	0.504	0.11	d	0.14	0.07	0.02	1.39
	344	36	0.008	0.55	0.19	0.56	1.80	0.27	0.010	0.06	0.002	0.11	0.15	0.09	0.36
4 (1000)	353	39	0.012	0.52	0.20	0.47	1.99	0.24	1.291	0.04	0.001	0.20	0.13	0.25	1.80
	354	37	0.010	0.55	0.20	0.55	2.06	0.31	0.040	0.10	0.003	0.14	0.14	0.04	1.58
	356	41	0.014	0.50	0.21	0.61	2.70	0.28	0.017	0.05	0.003	0.19	0.23	0.03	0.62
	357	43	0.009	0.50	0.19	0.54	2.13	0.23	0.861	0.08	0.002	0.18	0.12	0.08	0.78
	359	36	0.005	0.50	0.19	0.52	1.79	0.28	0.212	0.07	0.002	0.17	0.08	0.01	0.75
	368	37	0.005	0.46	0.15	0.41	1.23	0.18	0.660	0.02	0.003	0.14	0.09	0.01	7.56
	371	39	0.011	0.54	0.20	0.69	2.21	0.26	0.157	0.05	0.003	0.19	0.11	0.03	0.54
	381	46	0.012	0.49	0.27	0.54	2.03	0.43	4.569	0.07	e	0.13	0.13	0.02	0.50
	396	37	0.009	0.50	0.21	0.54	2.14	0.28	0.880	0.08	0.002	0.18	0.32	0.14	1.67
	398	28	0.009	0.48	0.21	0.56	1.43	0.25	0.366	0.08	0.002	0.16	0.10	0.02	0.70

Sal 1 = Parotid salivary glands

Sal 2 = Sublingual and submaxillary salivary glands

d = Pituitary lost at necropsy

e = Pituitary damaged at necropsy

APPENDIX 1Z**Glyphosate**

104 Week Dietary Carcinogenicity Study in Mice  
Background Incidences for Haemangiosarcoma and  
Histiocytic Sarcoma from Individual Studies

Haemangiosarcoma

Reference	Male	Female
a	2/50	1/50
b	2/50	1/50
c	4/50	2/50
d	0/50	0/50
e	1/50	1/50
f	1/50	0/50

Histiocytic Sarcoma

Reference	Male	Female
a	0/50	5/50
b	0/50	1/50
c	1/50	3/50
d	0/50	0/50
e	1/50	4/50
f	1/50	3/50

APPENDIX 18

Glyphosate  
104 Week Dietary Carcinogenicity Study In Mice  
Protocol, Timeplan and Amendments



## INVERESK RESEARCH INTERNATIONAL LIMITED

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Cheminova A/S  
PO Box 9  
DK-7620 Lemvig  
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15 November 1989

## PROTOCOL TITLE:

78 Week Dietary Carcinogenicity Study in Mice

IRI PROJECT NO: 438618

TEST MATERIAL: Glyphosate

IRI PROTOCOL CODE: Final

UK HOME OFFICE PROJECT PPL 60/00180  
LICENCE NO: Toxicology of Chemicals  
Procedure 6

STUDY DIRECTOR: D J Everett BSc CBiol MIBiol

PROJECTED TIMINGS: Begin: December 1989

Draft Report: April 1992

PROTOCOL APPROVED BY: *[Signature]* DATE: 17 Nov 89

PROTOCOL ACCEPTED BY: *[Signature]* DATE: 7 December 89

on behalf of the Sponsor

(No of pages: 17  
excluding front page)



## INVERESK RESEARCH INTERNATIONAL LIMITED

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### GLYPHOSATE

### 78 WEEK DIETARY CARCINOGENICITY STUDY IN MICE

### IRI PROJECT NO 438618

#### STUDY OBJECTIVE

The objective of this study is to assess the toxicity and carcinogenicity of the test material in mice after oral administration by diet for 78 weeks. The study is part of a programme of animal toxicity experiments designed to provide information which will allow the test material to be used safely.

#### JUSTIFICATION OF TEST SYSTEM

The oral route of administration has been selected for this study as this route has been defined by the Sponsor as a possible route of human exposure.

The mouse has been selected as the test model because of its ready availability and proven suitability in carcinogenicity studies.

#### TEST MATERIAL

The test material will be supplied by the Sponsor.

The test material will be stored in the dark at ambient room temperature unless otherwise instructed by the Sponsor.

Test material characterisation and handling procedures, etc., will be supplied by the Sponsor prior to commencement of the study.

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ANIMALSSpecies/Strain: Mouse/CD-1Supplier: Charles River UK Ltd., Margate, KentAge/Weight: ca 4 weeks, males - ca 21 g, females - ca 18 gNumber of Animals to be Supplied: 220 males and 220 females.Animal Supplier Quality Monitoring

The animals will be ordered to arrive at IRI Elphinstone Research Centre. They will be allowed to acclimatise to the IRI rodent toxicology accommodation for a period of 1-2 weeks before the commencement of dosing.

Animals suspected of being diseased will be culled from the study. If significant numbers of animals are unsuitable, the entire batch will be rejected and a new batch obtained. Wherever possible, any individual animal which fails to perform adequately during acclimatisation will be replaced from the same batch.

Twice yearly, IRI receives 10 male and 10 female animals from the supplier and these are subjected to clinical examination, necropsy, histopathology of selected organs and screening for selected viruses.

Identification

Each animal will receive a unique earmark which will identify it individually within the study and which corresponds to that animal's number.

Each animal will be ascribed a cage card which identifies that animal

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by project number, cage number, animal number, sex and treatment group. Each cage card will be colour coded according to treatment group.

ANIMAL MANAGEMENTRoom Location

Elphinstone Research Centre of IRI Ltd., in IRI's rodent toxicology accommodation.

Room Environment

The animals will be housed 1 per cage by sex and dose group; cage size 48 x 15 x 13 cm.

Suspended polypropylene cages with stainless steel grid tops will be used. Sterilised white wood shavings will be used as bedding; shavings will be regularly analysed for significant contaminants.

All cages will be supplied with polypropylene water bottles with rubber washers and melamine caps.

Cages will be changed as required. Bottles will be cleaned on a rota basis as required during the course of the study.

There will be automatic control of light cycle, temperature and humidity. Light hours will be 0700-1900 hours. Target ranges will be: temperature  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , humidity  $55\% \pm 10\%$  and air changes 15-20 per hour. There will be regular monitoring of temperature and humidity.

Animal Health and Quality Control

IRI has a rodent health quality control programme to monitor the unit in which this study will be housed. The programme may involve the use of 5 male and 5 female non-study sentinel animals which will be housed in the room for approximately the first 13 weeks of study,

and/or taking samples at necropsy from study animals where this does not interfere with protocol requirements. The data generated from these animals and/or samples are for the accumulation of background information about the animal unit, and will not form part of the results of the study.

#### Room Sanitation

Each day on completion of all work, floors will be swept and then mopped with TEGO disinfectant solution.

The room will be washed with TEGO disinfectant solution once each study week.

#### Diet

Food: Rat and Mouse (modified) No 1 Diet SQC Expanded (Fine Ground), supplied by Special Diet Services Ltd., Stepfield, Witham, Essex, CM8 3AB.

The diet will be supplied with a batch analysis for major nutritive components and significant contaminants. A typical analytical certificate will be included in the study report. The diet will be available ad libitum.

Water: the animals will have access to domestic mains water ad libitum. The water will be regularly analysed for dissolved materials, heavy metals, pesticide residues, pH, nitrate and nitrite.

A typical analysis will be included in the study report.

The food and water are not considered to contain any additional substances in sufficient concentration to have any influence on the outcome of the study.

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TREATMENTDose Groups

On arrival from the suppliers, the animals will be introduced to cages on racks. Cages will be ascribed to a treatment group by the use of random number sequences.

Animal numbers will be as follows:

Dose Group	Treatment (mg kg <sup>-1</sup> .day <sup>-1</sup> )	Animal Nos	
		Males	Females
1	Control - 0	1- 50	201-250
2	Low	51-100	251-300
3	Intermediate	101-150	301-350
4	High	151-200	351-400

Dose Levels

Dose levels will be agreed with the Sponsor after evaluation of preliminary studies carried out by the Sponsor under a separate protocol and contract at IRI Ltd. Dose levels will take into account the maximum tolerated dose in the test model and other factors such as anticipated human exposure.

Route and Duration of Administration

The animals will be dosed continuously by the diet for at least 78 weeks.

The concentration of test material in the diet will be regularly adjusted to achieve a constant dose level in mg of test material per kg of animals' body weight per day.

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Preparation of Formulated Diets

Formulated diets will be prepared by direct admixture of test material to untreated diet and blending for 20 minutes in a diet mixer.

Fresh diets will be prepared weekly for the first 13 weeks and fortnightly thereafter.

Analysis of Formulated Diets

Analysis of formulated diets will be undertaken with regard to stability, concentration and homogeneity.

These analyses will be undertaken at IRI under a separate protocol and contract. The frequency and analytical technique employed will be defined by the Sponsor.

OBSERVATIONSClinical Signs and Palpable Masses

All the animals will be examined for reaction to treatment during the day. The onset, intensity and duration of these signs will be recorded.

All animals will be palpated at least once each week. This will include the recording of the presence, location and size of all palpable masses.

Viability

All animals will be checked early morning and as late as possible each day for viability. Any animal showing signs of severe debility or intoxication will be isolated and if determined to be in extremis will be killed.

All animals killed in extremis or found dead will be given a detailed macroscopic examination and appropriate histopathological evaluation.

Body Weight

Body weights will be recorded weekly commencing at least 1 week pretrial and for the first 13 weeks of the study. After this body weights will be recorded once every 4 weeks up until the end of the study. Animals showing weight loss or deterioration in condition will be weighed more frequently as necessary.

Food Consumption

The quantity of food consumed by each cage of animals will be measured and recorded weekly commencing at least 1 week before the start of

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treatment and for the first 13 weeks of the study. After this the quantity of food consumed will be recorded over one week in every 4 up until the end of the study.

Water Consumption

Water consumption will be qualitatively monitored by visual inspection of the water bottles on a weekly basis throughout the study. If intergroup differences are noted, water bottles will be weighed, after consultation with, and at extra charge to, the Sponsor.

Differential Blood Count

After 52 and 78 weeks of dosing, a blood smear will be taken, fixed and stained from all animals. A differential blood count will be performed on smears from all Control and High dose animals at each timepoint.

If an intergroup difference is detected smears will be examined from the Intermediate and, if necessary, the Low dose group. Such an extension will be carried out after consultation with and at extra charge to the Sponsor.

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TERMINAL STUDIES (See Table 1 for Pathology Master Sheet).Animals to be Used:

Necropsy - all animals including dead or moribund animals.

Full Histopathological Evaluation - all animals in Control and High dose groups and all premature decedents; maximum 250 animals in total.

Limited Histopathological Evaluation - liver, kidneys and lungs of all animals not receiving full histopathology.

Further histopathological evaluation may be required either because there were more premature decedents than was originally estimated or because of intergroup differences in pathology findings. Any such extra work will be carried out after consultation with, and at extra charge to, the Sponsor.

Timing of Investigations:

After completion of 78 weeks of treatment.

Procedure

The animals including animals killed in extremis will be killed by carbon dioxide asphyxiation.

Dead or moribund animals will be necropsied as early as possible after discovery.

The necropsy will be performed under the guidance of a qualified pathologist and will consist of an external and internal examination.

All gross lesions will be recorded in descriptive terms, including location(s), size (in mm), shape, colour, consistency and number.

Representative samples of the tissues marked x in the 'To Fix' column in Table 1 will be taken from all animals and fixed in 10% neutral buffered formalin. Carcasses will be discarded following sampling of these tissues.

Tissues marked x in the 'To Examine' column in Table 1 will be processed from all Control and High dose animals and all premature decedents. Tissues marked xa will be processed from all animals. Sections will be cut 4-6 µm thick, stained with haematoxylin and eosin (H&E) and evaluated by a pathologist.

#### Key to Table 1

F = To Fix (blank column for checking purposes)

B = Blocking Sequence (for internal IRI use)

E = To Examine (blank column for quality control purposes)

a = Lungs will be perfused with fixative at necropsy. A section of both right and left sides of the lungs including mainstem bronchi will be prepared.

b = Three transverse sections of brain will be examined so as to include (i) frontal cortex and basal ganglia, (ii) parietal cortex and thalamus, and (iii) cerebellum and medulla oblongata.

c = Spinal cord will be examined at three levels: (i) cervical, (ii) midthoracic and (iii) lumbar.

d = Contracted bladders will be distended with fixative at necropsy. The epithelial surface will be examined at trimming.

e = Eyes and optic nerve will be fixed in Davidson's fluid and only examined if abnormal.

f = The gastrointestinal tract will be opened at necropsy and the mucosal surface of the stomach, small and large intestines examined before fixation.

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- g = Sternum and ribs (including costochondral junction) will be fixed; sternum only will be examined and evaluated.
- h = A transverse section of nasal cavity will be examined if clinical signs dictate.
- i = Blood smears will be made from all animals (except those found dead) and fixed in methanol. At the discretion of the study pathologist smears can be stained with Giemsa stain and examined microscopically to aid diagnosis of haemopoetic tumours. IRI Ltd reserves the right to charge the Sponsor extra for this work if it is extensive.
- j = Multiple, representative portions of tumours and suspected tumours (including surrounding normal tissue) will be fixed and processed. Where possible, local draining lymph nodes to such masses will be sampled, fixed and examined.

STATISTICAL ANALYSIS OF RESULTS

Interval data, such as body weight values, will be analysed for homogeneity of variance using the 'F-max' test. If the group variances appear homogeneous a parametric ANOVA will be used and pairwise comparisons made via Student's t-test. If the variances are heterogeneous log or square root transformations will be used in an attempt to stabilise the variances. If the variances remain heterogeneous, then a non-parametric test such as a Kruskal-Wallis ANOVA may be used. Individual between group comparisons will be made using Fisher's F-protected LSD method.

Tumour and histopathological lesions incidence will be analysed using chi-squared and Fishers Exact Probability test, modified for non-independence. Survival and tumour data will also be assessed using life-table techniques.

GOOD LABORATORY PRACTICE

Studies will be conducted in accordance with the recognised standards of GLP, including those established by OECD, US EPA and Japanese MAFF.

QUALITY ASSURANCE

Quality Assurance inspections will be carried out on critical phases in the execution of the study. Further inspections on routine, repetitive processes such as clinical chemistry and histology are also performed, although not necessarily on articles from this study.

The draft final report on the study will be audited.

These inspections and audits will be carried out by Quality Assurance personnel independent of the staff involved in the study.

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IRI 438618

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TIMEPLAN

Subsequent to the contract for this project being signed and before the commencement of the animal quarantine period at IRI, the Project Leader will send a detailed timeplan of all major events during the course of the study to the Sponsor. This will contain dates covering date of delivery of animals, first and last dosing days, dates for laboratory investigations and other specified observations, etc.

REPORTS

- (i) Details of any major changes will be communicated both verbally and in writing.
- (ii) Brief status reports will be despatched to the Sponsor at monthly intervals during the animal room phase of the study.
- (iii) A draft final report including methods used, results obtained and conclusions reached, will be despatched to the Sponsor.

On receipt of approval or amendments or 16 weeks from the draft report date if no amendments have been requested, we will despatch the Final report, 3 copies of which will be provided.

ARCHIVES

All data, slides, tissues, etc., generated during this study, together with a sample of the test article, will be stored in the scientific archives of Inveresk Research International for 10 years after issue of the Final report. Samples that are unstable may be disposed of before that time after consultation with the Sponsor.

At the end of the 10 year period the Sponsor will be consulted regarding the disposal or continued storage of raw data which would be at extra cost to the Sponsor.

INVERESK RESEARCH INTERNATIONAL

IRI 438618

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PROTOCOL AMENDMENTS

Changes or revisions of this protocol will be documented, the reason for the change or revision being stated, signed and dated by the Study Director. All such amendments will be sent to the Sponsor for approval and will be retained with the original protocol.

INVERESK RESEARCH INTERNATIONAL

IRI 438618

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STAFF INVOLVED IN THE PROJECT

Study Director: D J Everett BSc CBiol MIBiol

Project Leader: C Atkinson BSc

Animal Services Manager: A Dick FIAT

Pathologist (from): R Aitken PhD BVM&S MRCVS  
J Duffen MA VetMB PhD MRCVS  
J Finch MSc BVM&S MRCVS  
W Henderson BVM&S MRCVS  
P C Howroyd MA VetMB MRCVS  
M Jones BVM&S MRCVS  
F Macnaughtan BVetMed MRCVS  
P Millar BVM&S MVM MRCVS  
Diplomate ACVP  
E M Snodgrass BVM&S MRCVS

Statistician (from): D Chalmers MSc MIS  
P Bramwell BSc

Quality Assurance: A W Waddell BSc PhD

Compiled by: C J Perry  
Date: 15 November 1989

TABLE 1: PATHOLOGY MASTER SHEET

IRI Protocol No: 438618

Tissues	F	S	E		Additional Instructions
Liver/					
Gall Bladder	x			xa	
Heart	x			x	
Kidney x 2	x			xa	
Lung	x			xa	a
Spleen	x			x	
Adrenal x 2	x			x	
Thymus	x			x	
Testis/Ovary x 2	x			x	
Prostate/Uterus	x			x	
Sem Ves/Vagina	x				
Brain	x			x	b
Spinal Cord	x			x	c
Thigh Muscle	x			x	
Pancreas	x			x	
Submax Sal G1	x			x	
Submax Lymph N	x				
Pituitary	x			x	
Skin + Mammary G1	x			x	
Bladder	x			x	d
Eye x 2	x				e
Otic Nerve	x				e
Tongue	x				
Aortic Arch	x			x	
Hes Lymph N	x			x	
Thyroid x 2	x			x	
Parathyroid x 2	x			x	
Trachea	x			x	
Oesophagus	x			x	
Stomach	x			x	f
Duodenum	x			x	f
Jejunum	x			x	f
Ileum	x			x	f
Caecum	x			x	f
Colon	x			x	f
Rectum	x			x	f
Sciatic Nerve	x			x	
Sternum + Rib	x			x	g
Nasal Cavity	x				h
Blood Smear	x				
Abnormal tissue	x			x	
Ears	x				



## INVERESK RESEARCH INTERNATIONAL LIMITED

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Cheminova A/S  
PO Box 9  
DK-7620 Lemvig  
Denmark

15 November 1989

## PROTOCOL TITLE:

78 Week Dietary Carcinogenicity Study in Mice

IRI PROJECT NO:

438618  
AMENDMENT 1

TEST MATERIAL:

Glyphosate

IRI PROTOCOL CODE:

Final

UK HOME OFFICE PROJECT  
LICENCE NO:

PPL 60/00180  
Toxicology of Chemicals  
Procedure 6

STUDY DIRECTOR:

D J Everett BSc CBiol MIBiol

PROJECTED TIMINGS: Begin:

December 1989

Draft Report: April 1992

PROTOCOL AMENDMENT  
APPROVED BY: *[Signature]*

DATE: 17 Nov 89

PROTOCOL AMENDMENT  
ACCEPTED BY: *[Signature]*

DATE: 7 December 89

on behalf of the Sponsor

(No of pages: 2  
excluding front page)

GLYPHOSATE

78 WEEK DIETARY CARCINOGENICITY STUDY IN MICE

IRI PROJECT NO 438618

AMENDMENT 1

Study location will be MAM 19.

TIMEPLAN

Animals arrive	Thursday 30 November 1989
Start of Pretrial	Thursday 7 December 1989
Start of Dosing	Thursday 14 December 1989

Differential Blood Counts (Smears taken from all animals, all High dose and Control mice evaluated)

Week 53	Week beginning 13 December 1990
Week 78	Week beginning 6 June 1991

Terminal Studies

After Week 78	Monday 17-Friday 21 June 1991
---------------	-------------------------------

Full histopathological evaluation of all Control and High dose mice and all premature decedents.

Limited evaluation of liver, kidneys and lungs from all animals not receiving full histopathology.

INVERESK RESEARCH INTERNATIONAL

IRI 438618

2

AMENDMENT 2

Reporting

Quality Assurance	
of Draft report	March 1992
Issue of Draft report	April 1992

Compiled by: C Atkinson  
Date: 15 November 1989



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Cheminova A/S  
PO Box 9  
DK-7620 Lemvig  
Denmark

8 January 1990

PROTOCOL TITLE:

78 Week Dietary Carcinogenicity Study in Mice

IRI PROJECT NO: 438618  
AMENDMENT 2

TEST MATERIAL: Glyphosate

IRI PROTOCOL CODE: Final

UK HOME OFFICE PROJECT PPL 60/00180  
LICENCE NO: Toxicology of Chemicals  
Procedure 6

STUDY DIRECTOR: D J Everett BSc CBiol MIBiol

PROJECTED TIMINGS: Begin: December 1989  
Draft Report: April 1992

---

PROTOCOL AMENDMENT APPROVED BY: [Signature] DATE: 11 Jan 90

PROTOCOL AMENDMENT ACCEPTED BY: [Signature] DATE: January 06, 1990  
on behalf of the Sponsor  
(No of pages: 8  
excluding front page)

GLYPHOSATE

78 WEEK DIETARY CARCINOGENICITY STUDY IN MICE

IRI PROJECT NO 438618

AMENDMENT 2

Revised Timeplan

To allow more time for dose level selection the start of dosing has been delayed. The following timeplan will now apply:

Start of Dosing                              Thursday 21 December 1989

Differential Blood Counts (Smears taken from all animals, all High dose and Control mice evaluated)

Week 52	Week beginning 13 December 1990
Week 77	Week beginning 6 June 1991

Terminal Studies

After Week 78                              Thursday 20-Wednesday 26 June 1991

Histopathological evaluation remains as detailed in Amendment 1.

INVERESK RESEARCH INTERNATIONAL

IRI 438618

2

AMENDMENT 2

Dose Levels

Dose levels agreed with the Sponsor are as follows:

Group	Treatment (mg.Glyphosate.kg <sup>-1</sup> .day <sup>-1</sup> )
1	0
2	100
3	300
4	1000

These were based upon results obtained in a 13 Week Toxicity Study conducted at IRI (Project No 437918) and a Subchronic Toxicity Study conducted by the National Toxicology Program (Contract No NOI-ES-75198) and the EPA position of 1000 mg.kg<sup>-1</sup>.day<sup>-1</sup> in pesticide carcinogenicity studies with reference to 'Pesticide Assessment Guidelines Subdivision F, Position Document Selection of a Maximum Tolerated Dose (MTD) in Oncogenicity Studies (PB88-116736), (US) Environmental Protection Agency, 1987'.

In the IRI study there were no notable findings at 0, 200, 1000 or 4500 mg.kg<sup>-1</sup>.day<sup>-1</sup>. In the National Toxicology Program, dosages in terms of mg.kg<sup>-1</sup>.day<sup>-1</sup> averaged 0, 507, 1065, 2273, 4776 and 10780 in males and 0, 753, 1411, 2707, 5846 and 11977 in males (equivalent to 0, 3125, 6250, 12500, 25000 and 50000 ppm). Reduced body weight gain was seen in both sexes at 25000 and 50000 ppm and females at 25000 and 50000 ppm showed dehydration, emaciation and hypoactivity. Histopathological evaluation of salivary glands showed findings in parotid salivary gland down to the 6250 ppm group, which were more pronounced in males than females.

IRI 438618

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AMENDMENT 2

Test Material (Page 1)

Test material characterisation and identification will be carried out by IRI according to IRI Project No 339892.

Preparation of Formulated Diets (Page 7)

The relevant SOP for the diet preparation procedure (SOP/TSB/042) is attached.

Terminal Studies

All salivary glands (submandibular, parotid and sublingual) will be taken from all animals at necropsy and examined histopathologically from all Control and High dose groups and all premature decedents.

Key for Table 1

Please note 'i' should read:

i = Blood smears will be made from all animals killed in extremis and fixed in methanol. At the discretion of the study pathologist smears can be stained with Giemsa stain and examined microscopically to aid diagnosis of haemopoetic tumours. IRI Ltd reserves the right to charge the Sponsor extra for this work if it is extensive.

Compiled by: C Atkinson

Date: 8 January 1990

GENERAL INSTRUCTIONS FOR THE PREPARATION  
OF TREATED DIETS FOR USE IN TOXICITY STUDIES

1. INTRODUCTION

- 1.1 The incorporation of a test compound into animal diets may involve any of the following three procedures depending upon the specifications contained in a given experimental protocol and the physical properties of the test compound.
- 1.1.1 Direct dry-mixing of the test compound with ground diet in different proportions to achieve different dose levels.
- 1.1.2 Serial addition of diet to test compound, not diluting the test compound by a factor of more than 1 in 20 before mixing until the required concentration and total weight of diet are achieved.
- 1.1.3 Preparation of a premix of diet and test compound with a high concentration of the latter and appropriate dilution of the premix to achieve different dose levels.
- 1.2 The method of diet preparation to be used during a project must be evaluated before dosing commences.
- 1.2.1 Where the method is specified in the experiment protocol this will involve preparing a batch of diet using this method and then analysing the resultant mix for homogeneity. Trial mixes should cover the whole range of projected dose levels.

- 1.2.2 If no method of diet mixing is specified in the experiment protocol then the procedure outlined in section 2 below, should be followed to arrive at a satisfactory method.
- 1.3 Pre-trial mixes of diet should also be used to evaluate the analytical methods to be employed in relation to the test compound and to evaluate the stability of the compound diet.

## 2. PRE-EXPERIMENTAL DIET MIXING

- 2.1 If no information from the client directs otherwise, direct dry-mixing (1.1.1 above) of test compound with ground diet should be tried first.
- 2.2 If subsequent analyses show that diets so achieved are not homogeneous or have not achieved the supposed concentrations, serial dilution (1.1.2 above) should be attempted. In either of these cases the details of the mixing procedure should be as given in section 3. below.
- 2.3 If neither method of dry mixing achieves suitable diets then a high concentration premix must be prepared. This involves dissolving the test substance in a suitable volatile solvent, e.g. ethanol, mixing this solution with a small quantity of ground diet, and then evaporating off the solvent. A premix thus prepared should then be added directly to untreated diet in the appropriate proportions to give the required dose levels.
- 2.4 Should this be the method of diet mixing decided upon, and as ethanol may leave contaminants in the diet, a control premix, using ethanol only, must be prepared in the same way as the diet mix.

This control premix must be mixed with untreated diet to give the control diet. The proportion of control premix added should be equivalent to the quantity of diet premix required to produce the highest dose level.

- 2.5 Whichever method of diet mixing is decided upon it should be recorded on the appropriate Formulation Instruction Sheet (see SOP/TSB/002).

3. MIXING PROCEDURE

- 3.1 All test diets must be prepared in the diet mixing room. Premixes should be prepared in a fume cupboard.
- 3.2 All personnel involved in diet preparation must wear full protective clothing and safety glasses.
- 3.3 Unless otherwise specified sufficient diet to last one week should be prepared at one time.
- 3.4 The actual quantities of diet and test compound involved, either in the preparation of treated diet or premix, must be calculated by the Project Leader and recorded (see SOP/GTX/006). Requests for diet mixing must be submitted on the appropriate Formulation Request sheet (SOP/TSB/002).
- 3.5 Obtain the requisite quantity of whichever untreated diet is normally given to the species on study.
- 3.6 If the test diet is to be prepared by dry mixing, it may be necessary to grind the test compound to a powder using a mortar and pestle. Determine from the experiment protocol or information supplied by the client the particle size required and sieve the

powder obtained by grinding to ensure that only the required particle size (or smaller) is used for diet mixing. Test substances may always be handled in accordance with SOP/TSB/004 or as otherwise directed (SOP/TSB/005).

- 3.7 Diet will normally be mixed on a Winkworth Change Drum Tumble Mixer (see SOP/TSB/054). Premixes may be prepared on this mixer or using the Gardner Double-Cone Mixer, (SOP/TSB/050) or the Hobart AE 200 mixer (SOP/TSB/056) whichever has been shown to be the most appropriate mixer from pre-trial work.
- 3.8 When dry mixing or preparing a premix, mixing time should be a minimum of 20 minutes following each addition of test compound, unless otherwise specified in the experiment protocol, or, unless pre-experimental diet-mixing shows otherwise (see Formulation Instructions).
- 3.9 When serially diluting, following each addition of test compound, the diet should be mixed for a minimum of ten minutes unless otherwise indicated by the Formulation Instructions.
- 3.10 All untreated diet for incorporation into any one week's test diet must be drawn from the same batch of diet, as supplied by the manufacturer. The Test Substance Formulator must check that sufficient diet from one batch is available for this requirement to be fulfilled.
- 3.11 Bins used for diet preparation must be reserved for one group/sex formulation level on one study and must be permanently identified in water insoluble, felt-tipped pen to show animal room, project number, group and sex.

Before leaving the Dispensary each filled container must be clearly labelled with the project number, the test compound, the concentration of test compound present in the diet, the dose group for which the diet is intended, the date of mixing, the signature of the technician who performed the mixing, the batch number of test compound and the batch number of diet.



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PO Box 9  
DK-7620 Lemvig  
Denmark

3 May 1990

PROTOCOL TITLE:

78 Week Dietary Carcinogenicity Study in Mice

IRI PROJECT NO: 438618  
AMENDMENT 3

TEST MATERIAL: Glyphosate

IRI PROTOCOL CODE: Final

UK HOME OFFICE PROJECT PPL 60/00180  
LICENCE NO: Toxicology of Chemicals  
Procedure 6

STUDY DIRECTOR: D J Everett BSc CBiol MIBiol

PROJECTED TIMINGS: Begin: December 1989  
Draft Report: April 1992

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PROTOCOL AMENDMENT APPROVED BY: \_\_\_\_\_ DATE: 3 May 90

PROTOCOL AMENDMENT ACCEPTED BY: R. Lysell DATE: 11 June 90

on behalf of the Sponsor

(No of pages: 2  
excluding front page)

INVERSK RESEARCH INTERNATIONAL

GLYPHOSATE

78 WEEK DIETARY CARCINOGENICITY STUDY IN MICE

IRI PROJECT NO 438618

AMENDMENT 3

Pathology Master Sheet for Carcinogenicity Study Animals (Table 3)

To meet the requirements for the USA Environmental Protection Agency Pesticide Assessment Guidelines, Subdivision F, Series 83-2 for Oncogenicity Studies the tissues designated in the 'To Weigh' column will be weighed from 10 males and 10 females from each group at the terminal kill.

Compiled by: T Martin  
Date: 3 May 1990

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IRI 438618

AMENDMENT 4

2

TABLE 1: PATHOLOGY MASTER SHEET

IRI Protocol No: 438618

Tissues	W	F	B	E		Additional Instructions
Liver/						
Gall Bladder	x x			xa		
Heart	x x			x		
Kidney x 2	x x			xa		
Lung	x x			xa	a	
Spleen	x x			x		
Adrenal x 2	x x			x		
Thymus	x x			x		
Testis/Ovary x 2	x x			x		
Prostate/Uterus	x x			x		
Sem Ves/Vagina	x					
Brain	x x			x	b	
Spinal Cord	x			x	c	
High Muscle	x			x		
Pancreas	x			x		
Submax Sal Gl	x x			x		
Sublingual Sal Gl	x x			x		
Parotid Sal Gl	x x			x		
Submax Lymph N	x					
Pituitary	x x			x		
Skin + Mammary Gl	x			x		
Bladder	x			x	d	
Eye x 2	x				e	
Optic Nerve	x				e	
Tongue	x					
Aortic Arch	x			x		
Mes Lymph N	x			x		
Thyroid x 2	x			x		
Parathyroid x 2	x			x		
Trachea	x			x		
Oesophagus	x			x		
Stomach	x			x	f	
Duodenum	x			x	f	
Jejunum	x			x	f	
Ileum	x			x	f	
Caecum	x			x	f	
Colon	x			x	f	
Rectum	x			x	f	
Sciatic Nerve	x			x		
Sternum + Rib	x			x	g	
Nasal Cavity	x				h	
Blood Smear	x				i	
Abnormal tissue	x			x	j	
Ears	x					



## INVERESK RESEARCH INTERNATIONAL LIMITED

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13 May 1990

## PROTOCOL TITLE:

104 Week Dietary Carcinogenicity Study in Mice

IRI PROJECT NO: 438618  
AMENDMENT 4

TEST MATERIAL: Glyphosate

IRI PROTOCOL CODE: Final

UK HOME OFFICE PROJECT PPL 60/00180  
LICENCE NO: Toxicology of Chemicals  
Procedure 6

STUDY DIRECTOR: D J Everett BSc CBiol MIBiol

PROJECTED TIMINGS: Begin: December 1989

Draft Report: April 1992

PROTOCOL AMENDMENT APPROVED BY: *H.A.* DATE: 14 May 91

PROTOCOL AMENDMENT ACCEPTED BY: *R. G. Marshall* DATE: 7 June 91

on behalf of the Sponsor

(No of pages: 2  
excluding front page)



## INVERESK RESEARCH INTERNATIONAL LIMITED

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GLYPHOSATE104 WEEK DIETARY CARCINOGENICITY STUDY IN MICEIRI PROJECT NO 438618AMENDMENT 4Duration of Dosing

Due to the high survival rate it has been agreed with the Sponsor to extend the duration of dosing to 104 weeks. Consequently, an additional differential blood count will be included at approximately Week 102.

Laboratory Investigations

Differential Blood Count (smears taken from all surviving animals, all Control and High dose mice for evaluation)

Week 102/103: Week beginning Monday 2 December 1991

Terminal Studies

Terminal Necropsies: Wednesday 18 - Tuesday 24 December 1991

IN VERSK RESEARCH INTERNATIONAL

IRI 438618

2

Amendment 4

Reporting

Quality Assurance of Draft

Report: August 1992

Issue of Draft Report: September 1992

Compiled by: A Strutt

Date: 13 May 1991



## INVERESK RESEARCH INTERNATIONAL LIMITED

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Cheminova Agro A/S  
PO Box 9  
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Denmark

25 November 1991

## PROTOCOL TITLE:

104 Week Dietary Carcinogenicity Study in Mice

IRI PROJECT NO: 438618  
AMENDMENT 5

TEST MATERIAL: Glyphosate

IRI PROTOCOL CODE: Final

UK HOME OFFICE PROJECT PPL 60/00180  
LICENCE NUMBER: Toxicology of Chemicals  
Procedure 6

STUDY DIRECTOR: D J Everett BSc CBiol MIBiol

PROJECTED TIMINGS: Begin: December 1989

Draft Report: April 1992

PROTOCOL AMENDMENT APPROVED BY:  DATE: 26 November 91

D J Everett

PROTOCOL AMENDMENT APPROVED BY: C Atkinson DATE: 26 Nov 91.

C Atkinson

PROTOCOL AMENDMENT ACCEPTED BY: R. Glynnick DATE: 2 Dec. 91

on behalf of the Sponsor

(No. of pages: 1  
excluding front page)

INVERESK RESEARCH INTERNATIONAL

GLYPHOSATE

104 WEEK DIETARY CARCINOGENICITY STUDY IN MICE

IRI PROJECT NO 438618

AMENDMENT 5

The current Study Director is leaving the employment of IRI, and so a new Study Director will be appointed from 2 December 1991.

The new Study Director will be C Atkinson BSc.

As a result of the change of Study Director, a new Project Leader will be appointed from 2 December 1991.

The new Project Leader will be A V Strutt BSc.

Compiled by: D J Everett  
Date: 25 November 1991

APPENDIX 19

Glyphosate

104 Week Dietary Carcinogenicity Study In Mice

Protocol and Amendments for The Routine Analysis of Glyphosate in  
Diets Prepared for a 104 Week Dietary Carcinogenicity Study in Mice  
(IRI Project No. 339845)



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Denmark

## PROTOCOL TITLE:

The Routine Analysis of Glyphosate in Diets Prepared for a 78 week  
Dietary Carcinogenicity Study in Mice (IRI Project No. 438618)

IRI PROJECT NO: 339845

TEST MATERIAL: Glyphosate

IRI PROTOCOL CODE: Final

STUDY DIRECTOR: W B Craig, GRSC

PROJECTED TIMINGS: Begin: December 1989  
Draft Report: As per 438618

PROTOCOL APPROVED BY: Bronee Craig DATE: 8/December/1989

PROTOCOL ACCEPTED BY: Wolke Dyrkach DATE: 13/December/1989  
on behalf of the Sponsor  
(No. of pages: 4  
excluding front page)



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### GLYPHOSATE

#### THE ROUTINE ANALYSIS OF GLYPHOSATE IN DIETS PREPARED FOR A 78 WEEK DIETARY CARCINOGENICITY STUDY IN MICE (IRI PROJECT NO. 438618)

IRI PROJECT NO. 339845

The Sponsor plans to undertake a 78 week carcinogenicity study in mice with the compound glyphosate. The test material will be administered orally in diet. To ensure accurate and homogeneous formulation of the preparation and thus correct dosing of the animals it will be necessary to undertake routine analysis of the formulations.

#### LOCATION OF STUDIES

The preparation of dietary mixtures will be carried out in the Dispensary, Elphinstone Research Centre, field station of IRI.

The analytical phase of the study will be conducted in the Analytical Chemistry Laboratories at Inveresk Gate, IRI.

#### TEST MATERIALS

The test material will be supplied by the Sponsor.

The test material will be stored in the dark at ambient room temperature unless otherwise instructed by the Sponsor.

Test material characterisation and identification will be undertaken at IRI under a separate protocol (IRI Project No. 339892).

IRI 339845

2

METHOD ESTABLISHMENT AND VALIDATION

An analytical method for the determination of glyphosate in diets has previously been established at IRI under Project No 337502 (Method 3750).

ROUTINE ANALYSIS OF DIETARY FORMULATIONS

Three aliquots of each formulation (including controls) will be taken for analysis as follows:

Commencement and during months 1, 2, 3, 6, 9, 12, 15 and 18 (ie 9 occasions)

Diets will be considered satisfactory if the mean calculated and the theoretical concentrations agree within  $\pm$  10% ( $\pm$  15% for diets of 15 ppm or lower). Preparation will be considered homogeneous if the coefficient of variation of replicate aliquots is not outside 10%.

Assay validity will be acceptable if the calculated and theoretical concentration of quality control samples agree within  $\pm$  10%.

Formulations falling outside these target values will be reformulated if possible. In instances where this is not practical prior to dosing, deviations from target values will be documented and the subsequent formulation analysed.

REPORTING

Results will be reported as data sheets for inclusion as an appendix to the main toxicology study.

IRI 339845

3

GOOD LABORATORY PRACTICE

Studies will be conducted in accordance with recognised international standards of GLP including those set forth by the OECD and Japanese, USA and British Authorities.

QUALITY ASSURANCE

Quality Assurance Inspections will be carried out on critical phases in the execution of the study.

The draft report on the study will be audited.

These inspections will be carried out by Quality Assurance personnel independent of staff involved in the study.

ARCHIVES

All data generated during this study, together with a sample of the test material, will be stored in the Scientific Archives of Inveresk Research International Limited for 10 years after issue of the final report. Samples that are unstable may be disposed of before that time after consultation with the Sponsor.

At the end of the 10 year period the Sponsor will be consulted regarding the disposal or continued storage of raw data which would be at extra cost to the Sponsor.

PROTOCOL AMENDMENTS

Changes or revisions of this protocol will be documented, the reason for the change or revision being stated, signed and dated by the Study Director. All such amendments will be sent to the Sponsor for approval and will be retained with the original protocol.

IRI 339845

4

STAFF INVOLVED IN THE STUDY

Study Director: W B Craig, GRSC

Project Leader: K Fisher, BSc

Quality Assurance: A W Waddell, BSc, PhD  
D Watson, BScCompiled by: W B Craig  
Date: 7 December 1989



## INVERESK RESEARCH INTERNATIONAL LIMITED

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Cheminova A/S  
P O Box 9  
DK-7620 Lemvig  
Denmark

## PROTOCOL TITLE:

The Routine Analysis of Glyphosate in Diets Prepared for a 78 week  
Dietary Carcinogenicity Study in Mice (IRI Project No. 438618)

IRI PROJECT NO: 339845  
Amendment 1

TEST MATERIAL: Glyphosate

IRI PROTOCOL CODE: Final

STUDY DIRECTOR: W B Craig, GRSC

PROJECTED TIMINGS: Begin: December 1989  
Draft Report: As per 438618

AMENDMENT 1 APPROVED BY: Bruce Craig DATE: 2 July 1990

AMENDMENT 1 ACCEPTED BY: Mark Taylor DATE: 5 July 1990  
on behalf of the Sponsor  
(No. of pages: 1  
excluding front page)



## INVERESK RESEARCH INTERNATIONAL LIMITED

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### GLYPHOSATE

#### THE ROUTINE ANALYSIS OF GLYPHOSATE IN DIETS PREPARED FOR A 78 WEEK DIETARY CARCINOGENICITY STUDY IN MICE (IRI PROJECT NO. 438618)

IRI PROJECT NO. 339845

#### AMENDMENT 1

##### Reason for Amendment

##### Routine Analysis of Dietary Formulations

Diets will be analysed according to the following schedule:

Commencement and during Months 1, 2, 4, 6, 8, 10, 12, 14, 16 and  
18 (ie on 11 occasions)

##### Staff Involved

Head Regulatory Chemistry: B D Cameron, BSc, CBiol, MIBiol

Functional Manager,  
Product Chemistry: K MacLean, BSc, PhD

Study Director: W B Craig, GRSC

Project Leader: K Fisher, BSc

##### Amendment 1

Compiled by: W B Craig

Date: 2 July 1990



## INVERESK RESEARCH INTERNATIONAL LIMITED

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 Denmark

## PROTOCOL TITLE:

The Routine Analysis of Glyphosate in Diets Prepared for a 104 Week  
 Dietary Carcinogenicity Study in Mice (IRI Project No. 438618)

IRI PROJECT NO: 339845  
 Amendment 2

TEST MATERIAL: Glyphosate

IRI PROTOCOL CODE: Final

STUDY DIRECTOR: N B Dinwoodie BSc MSc GRSC

PROJECTED TIMINGS: Begin: December 1989  
 Draft Report: As per 438618

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AMENDMENT 2 APPROVED BY: Neil Dinwoodie DATE: 05 Aug. 91  
Bruce Craig DATE: 5/AUGUST/91

AMENDMENT 2 ACCEPTED BY: Marko Agustah DATE: 13/AUGUST/91  
 on behalf of the Sponsor (No. of pages: 1  
 excluding front page)



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### GLYPHOSATE

#### THE ROUTINE ANALYSIS OF GLYPHOSATE IN DIETS PREPARED FOR A 104 WEEK DIETARY CARCINOGENICITY STUDY IN MICE (IRI PROJECT NO. 438618)

IRI PROJECT NO. 339845

### AMENDMENT 2

#### REASON FOR AMENDMENT

#### Personnel Involved in Project No. 339845

Due to internal reorganisation at IRI, the following changes in personnel are necessary:

Study Director: N B Dinwoodie BSc MSc GRSC  
Effective 1 August 1991

#### Routine Analysis of Dietary Formulations

Due to an extension of the dosing period for IRI Project No. 438618 to 104 Weeks, additional analyses of dietary formulations will take place during Months 20, 22 and 24.

#### Amendment 2

Compiled by: N B Dinwoodie  
Date: 5 August 1991